LAVATER'S

LOOKING-GLASS.

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LAVATER'S

LOOKING-GLASS;

OR,

Essays on the Face of Animated Nature,

FROM

MAN *to* PLANTS.

DEDICATED TO

HER GRACE THE DUCHESS OF DEVONSHIRE.

By Lavater, Sue, & Co.

The *wretch* that wears no smiles upon his face,
And is not mov'd by honesty of heart
To split his sides with laughter-loving dames,
Who spread the Graces, as with sport and glee
They mock the *miser's* melancholy mood,
Till raptures soon intoxicate the brain;
While Reason yields her empire for an hour,
And says (*as Shakespeare said for John O'Combe*)——
"*Let no such man be trusted.*"———

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TO

HER GRACE,

GEORGIANA,

DUCHESS OF DEVONSHIRE,

This Volume

IS MOST HUMBLY INSCRIBED,

BY

Lavater, Sue, & Co.

Lavater, Sue, & Co.

TO THE

LITERARY AND FASHIONABLE WORLD.

WE commit ſome manuſcripts to the preſs with diffidence, being ſenſible that, as pictures of the ſame objects vary according to each Painter's merit, ſo mother Nature has left a wide field for different deſcriptions of her beauties. We do not, however, pluck a wreath from LAVATER's venerable brow by prefixing his good Name to a Book that preſents ſome of his intereſting Sketches in a new point of view, with additional Obſervations on the Animal Creation; nor have we failed to aſſign to that eminent Phyſiognomiſt ſuch a ſhare of Profit upon it as ſhall be deemed conſiſtent with juſtice, eſteem, and fellow-feeling for him, at a moment when he is ſuffering in the

cauſe of his much-injured country,——Switzerland.

Upon this honourable ground, where we commit no depredation upon any privileged property, nor even blindly follow that great Profeſſor in all the flights of Fancy, we think it incumbent on us to uſe the preceding Title, and adopt the Signature of LAVATER, SUE, & Co. for our joint benefit, in order to announce the real founders of a repaſt intended for liberal minds.

Were the whole found agreeable to the wiſe order of things, it would be needleſs to trace any further the hearts which beat high with zeal to cultivate the neglected Art of Reading Faces, from a conviction that it might be rendered equally pleaſant and uſeful to the thinking part of mankind.

Nay, there are enlightened men, bred in the LAVATERIAN School, and buoyed up with faith in doctrines ſuperficially conſidered, or lightly condemned, upon vulgar notions and popular prejudices.——

dices.——To them it is unneceſſary to ſay, what they know, that Dr. SUE is honourably mentioned in LAVATER's Treatiſe on Oſteology, as a Man diſtinguiſhed for Anatomical Knowledge, and as a Member of the moſt learned Societies, at Home and Abroad.

Suffice it, therefore, to add, that it is his Eſſay on Living Creatures, with variations, or, at leaſt, SUE's ideas clothed in the Britiſh language of freedom, that we ſubmit, with our reſpectful appeal, to the Public Tribunal.

This Analyſis of that Work has been made under the impreſſion of experience,—that exhibitions of naked truth applauded in France, were ill calculated for the pure manners of Britain, where Grecian Statues want a veil adapted to Engliſh delicacy.—Thus, whatever imperfections Critics may find in our attempt to embelliſh Surgical Remarks, in a Syſtem founded on French and German ground-works, we truſt, that even they will give us credit for our endeavours to pleaſe

and

and inſtruct the riſing youth, without offending the chaſteſt ear.

Indeed, as our Pen has not been accuſed of flattery, we truſt, that it will never be diſgraced for raiſing unpleaſant feelings in any breaſt.

Lavater, Sue, & Co.

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INTRO-

INTRODUCTION.

SEVERAL protectors and professors of the fine arts have approved of our researches respecting the passions and their expressions: we have therefore thought it incumbent on us to comply with their wishes, by communicating the result of further inquiries, after having fully treated this important matter with respect to art and nature, painting and physiognomy.

It is with a view to general utility, more than from a desire of gaining fame, that we present a series of observations paving the way to discoveries. —In these Essays every article may be considered as a step leading intelligent beings to a better light, where they will attain the summit of their pursuits, by feeling themselves convinced that all living creatures have a set of features and complexion, forming so many pages of that great book of Nature which it is our duty to learn;—nay, the perusal of it is so much the more easy, as it is a delightful task to gratify that innate passion, the strong curiosity to know ourselves.

Even with the dawn of reaſon, does not a child pretend to judge of faces?—At every ſtage, are not the penetrating eyes of a man directed to find out the ſecret thoughts of the ſtranger whom he meets? —And do we not daily hear it ſaid, as an inconteſtable truth, that ſuch-a-one is lively, dull, thoughtful, peeviſh, melancholy, &c. merely from a glance at his exterior appearance?

Certain it is, that the human form, particularly the countenance, is ſtamped with a diſtinguiſhing mark, by which the mental emotions may be diſcerned; the body being juſtly called a ſubſtantial image of the mind, or the ſoul itſelf rendered viſible. It is, likewiſe, univerſally acknowledged, that the improvement of talents ought to be the firſt object of our ſtudies; for Genius produces ſuch maſter-pieces as reflect honour on his creative power. Beauty aſſerts equal rights to the productions of the liberal arts, becauſe the colours, ſo often employed to paint the Graces, are embelliſhed in thoſe hands which had been only deemed fit to uſe the needle; inſomuch that a living model of perfection, a Venus, may take up the painter's pallet, and fill his place.

Beſides, how is it poſſible that the fair ſex ſhould fail to excel in painting, ſince the charming eye pierces through the moſt intricate lineament, and ſeizes the likeneſs without miſſing a ſhade of diſtinction!

Let, however, the ſtrong paſſions be ſtill expreſſed with bolder ſtrokes of art from the firm hand of man;

man; but it would be difficult for him either to ſee, conceive, or take off moving figures in a lively ſcene, where love and harmony combined to direct the powers of retracing youthful looks, grace and motions keeping pace with the pulſe of ſenſibility.* Theſe varying beauties are beſt reſerved for woman's gentle touch and refined feelings.

Indeed, we might ſupport our aſſertions, by mentioning many ſtriking inſtances of ſuperior excellence in the faireſt part of the creation; but we ſhall only dwell, at preſent, on thoſe heroic actions by which French women have immortalized their names during the late memorable revolution.

Buoyed up above the fear of death by ſentimental courage, they carried to the higheſt pitch

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* We have given an imperfect imitation of Dr. Sue's following compliment to the fair ſex. *Avouons*, (ſays he), *que les mouvements doux, delicats, legers, & mille détails que l'homme ne diſtingue pas, ou qu'il craint d'approfondir, ſont reſervés au ſentiment auſſi courageux qu'admirable, & à la touche fine & ingenieuſe des femmes.* On this occaſion a fair lady can beſt determine, whether we have raiſed the ſame ſenſations in her breaſt, by an alluſion to ſome of thoſe thouſand graces which the French phyſician left to our imagination; but in order to convey his idea beyond the literal meaning, it ſtruck us, that we ought to imagine ſuch a lively ſcene as is repreſented in the Dancing Hours, of which a copy is in our poſſeſſion; and as the original picture is painted on a ceiling in the Roſpigliоſo Palace, we ſuppoſe that it has not yet followed the victor's triumphal car, as other precious monuments have done, and will ever do, ſo long as the fine arts are eſteemed and cultivated.

that enthuſiaſm, which was the ſource of ſuch generous ſacrifices as dignified misfortunes, by proving a legal title to that empire of our hearts, which they were before ſuppoſed to have uſurped by their charms.

Be that as it may, we muſt take notice of ſimilar treatiſes written by our predeceſſors; but as the greateſt part of them contain a mixture of falſe principles with truth, we need only mention, in the firſt place, Galien's judicious Reflections, with Le-Brun's excellent Treatiſe on the Paſſions, the Philoſophical Enquiries of Deſcartes, Diderot's poſthumous work on the Art of Painting, Baroneſs de Stael's Conſiderations on the Happineſs of Nations; and, above all, Lavater's Eſſays on Phyſiognomy, a production that forms an invaluable record in the hiſtory of mankind. Indeed, too many encomiums cannot be beſtowed on this laſt eminent writer, whoſe judgment appears in his choice of romantic views, preſented to the world as a ſet of fragments, without order, becauſe he felt the difficulty of an attempt to compleat a regular ſyſtem, on a grand ſcale, adapted to ſuch ſublime ideas as overleaped the bounds of art.

It is true, indeed, he ſaw men and things through a medium ill-ſuited to common eyes; yet, ſince he collected a maſs of materials ſufficient for the foundation of a more perfect theory than his own, there is room to hope that he will form it, by following

following the train of thoughts ſuggeſted; for it might be dangerous to build caſtles in the air, without knowledge founded on repeated experiments.

Let us, neverthelefs, acknowledge the ſatisfaction and inſtruction received from that *great profeſſor of phyſiology*, while we paſs over in ſilence the flights of fancy, the viſions of an eccentric character, and the errors of an honeſt man, whom we love, reſpect, and admire, much as we may differ from him upon eſſential points.

He it was that earneſtly recommended anatomy to painters, phyſiognomiſts, and all thoſe who wiſh to know themſelves, and ſtudy the human frame.—Indeed, he excelled in that liberal art; and, when young ſtudents find him expreſs his regret for not having cultivated it ſufficiently, they will feel the neceſſity of devoting their time to a ſcience ſo cloſely connected with their profeſſions.

The advantages to be derived from a literary Eſſay of this kind, cannot be repreſented in a fairer light, than by ſuppoſing the caſe of a pupil employed to paint a ſea-port, containing inhabitants from different countries; an iſland full of various animals, with ſeveral kinds of plants; or a battle between troops of two contending nations: ſuch a youth will flatter himſelf with the vain thought of having juſtly delineated the objects in queſtion, by

taking off the ſuperficial view of living creatures, with the dreſs peculiar to each nation.

But naturaliſts will inform him, as we do, that between one caſt of people and another there are ſhades of difference, as well as through the whole creation, from man and beaſt down to the plant.

For inſtance, a Dutchman's ſkull is rounder, has larger and more regular bones, with the hollow part about the cheek bone not ſo even as others.

In like manner, animals and plants, of the ſame country and ſpecies, differ remarkably in colour, ſize, conſtitution, and length of life.

Hiſtorical painters and limners will appreciate remarks of this ſort and others, abundantly ſupplied by Lavater. From ſuch ſtores we ſhall occaſionally chuſe a portion, in the courſe of our following meditations.

LAVATER'S LOOKING-GLASS.

ESSAY I.

On the Neceſſity of Studying the Conſtitution of Living Creatures, and the Imitative Arts.

AT an exhibition of pictures, the majority of ſpectators is captivated by lively colours, over-ſtrained forms, and extravagant embelliſhments. So long as their ſenſes and foibles are flattered, they gaze with pleaſure at a dauber's painting, which will not ſtand the teſt of a diſcerning eye, when it comes to be appreciated by the ſtandard of true taſte and judgment.

But men endowed with theſe qualities will find out a maſter-piece, that has been ſlighted or unnoticed by vulgar eyes.

Their raptures, then, proceed from admiration of juſt deſign, true likeneſs, comely looks, and every trivial appendage that ſtrikes them at once in a picture, where, with one glance, they ſee art approach Nature's faireſt ſhape, ſo far as to renew, on their minds, the impreſſions made by the real ob-

jects represented. Yet, while the best master-pieces are not valued in France so much as in other countries, the artists have reason to complain of injustice done to them in that respect; because, in so difficult a profession, the qualifications, application, and information required, exceed any idea conceived by people not conversant with arts and sciences.

Nature is a stingy mother, and dispenses with a sparing hand the noble talents necessary to imitate her complexion, motions, and expression. She has bestowed on Genius alone that free gift, the divine flame which forms her strong colours and grandest features. An equal degree of perfection cannot be attained merely by dint of labour; yet the heavenly spark, producing such happy effects, is indebted to industry for giving full scope to invention and imitation. Thus an artist would grope in the dark for ever, without accomplishments derived from additional principles, equally indispensable as the technical rules that he follows. We allude to a knowledge of history, mythology, or the fables of the heathen gods, and anatomy; for a man who practises a liberal profession, unless he be a proficient in these matters, must be condemned to live in perpetual obscurity.

Many arguments are needless to prove surgical knowledge a prime requisite in a painter, as he would labour in vain to represent the most delightful

ful ſituations and varied proſpects, were he not capable of drawing and deſcribing all the component parts of the human body. Nay, how cold, dull, and gloomy, would his landſcapes appear, without being enlivened by the preſence of living creatures, eſpecially man, the moſt perfect being that came from the Creator's hand!

Nothing ſo clearly demonſtrates the utility of the ſcience of anatomy, as the ſpecial care taken by the firſt maſters, in all ages, to acquire a proficiency in ſuch a collateral branch of their reſpective profeſſions.

It was thus that Raphael, Michael Angelo, Giulio Romano, the Carracci, Dominichini, Le Brun, Le Sueur, and other painters, ſculptors, and architects, immortalized their names. Indeed, ſo perſuaded was Michael Angelo of the importance of anatomical obſervations for improving the imitative arts, that he formed a deſign of publiſhing a compleat treatiſe on the muſcular motions. What a loſs to the republic of letters that his project was never executed! For who better than him could have given uſeful leſſons upon a ſubject that he had long conſidered in the moſt pleaſing point of view; ſince there never was his equal for joining the cleareſt theory to the moſt compleat execution? His ſuperior abilities are ſtill diſplayed in all thoſe monuments of Roman grandeur which came from his pencil or his chiſel, and have excited the admiration

miration of every age by their ſtriking beauty and exact ſymmetry.

Conſequently, in conjunction with Leonard de Vinci, that great maſter was beſt qualified to eſtabliſh, as he did, thoſe famous academies in Italy, which even Raphael did not diſdain to conſult.

Hence the principal qualification for juſt deſigns appears to be derived from an attentive ſtudy of the *human frame*, conſidered in all its parts, poſtures, and points of view. The ſtudent muſt therefore ſee, direct, or perform the chief ſurgical operations, ſo far as to ſift into the maze or inner works of that *aſtoniſhing machine*, while he ſlackens or looſens the muſcles, and proves, by feeling or ocular demonſtration, the exiſtence even of the ſlighteſt excreſcence, tallying with the models before him. He ſhould obſerve minutely how different particles of the bony ſyſtem are put out of order, and wound up again by adding freſh ſprings to the muſcles; and it is equally neceſſary for him to make other experiments, to diſcover the outward effect of interior changes in the *grand clock-work* in queſtion; for, when the cauſes are known, their effects can be more juſtly delineated.

Nature is moſt faithfully copied by a painter that ſees her ſecret works through a veil, becoming tranſparent in his eye after he has ſtudied anatomy.

A ſingle look then ſuffices for him to take off the likeneſs of thoſe viſible objects, which he fixes on his canvaſs with equal fidelity and preciſion.

It

It is not, however, leſs true, that practitioners only can form a juſt conception of the time required to impreſs upon a ſpectator's mind, ſuch a deluſion as to make him imagine that an admirable maſterpiece was produced by bold or ſudden ſtrokes of art; but when merit meets with applauſe from thoſe who know the pains taken, and difficulties overcome, it affords the moſt acceptable recompenſe: yet the cool indifference that moſt people feel in ſeeing Nature diſplayed, produces in them the ſame inſenſibility whenever they review a juſt repreſentation of her faireſt works; for a ſtrict reſemblance between ſuch copies and originals only ſerves to renew ſenſations familiar to vulgar minds. In that caſe the painter would be leſs meritorious, were he more applauded by the ignorant claſs, whoſe example in high life renders it ſometimes unfaſhionable to take much notice of paintings, where every object bears its natural appearance.

You, then, young pupils, who have an honeſt ambition to riſe and make a figure in the world, above all things fail not to ſtudy Nature. Read daily ſome pages of her volumes, and ſet no value upon other books, unleſs they are commentaries of her ſuperior work. Yes; the human body alone contains a compleat ſyſtem of anatomy *, which

* ON ANATOMY.

Anatomy reveals great Nature's plan,
Diſplays on earth the majeſty of man,

you

you ſhould always have before your eyes, as the ſubject of contemplation, and the means of attaining perfection

---

Whoſe curious frame betrays the power divine,
With God's own image ſtamp'd on every line
Of features, glowing with a ſoul refin'd,
To prove the face a mirror of the mind.
Upright, he moves along with ſolemn pace,
Looks up to Heaven, or courts the kind embrace
Of blooming Love, whoſe temple he admires;
While Venus ſmiles, inſpiring warm deſires,
Adorned by Flora, by the Graces dreſt,
Like mother Eve, by Adam kiſs'd and bleſt.
Their paradiſe, replete with heavenly joys,
Supplies the modern race of girls and boys;
Endear'd by ties of blood and tender hearts
To Æſculapius, who reviews the parts,
Where Death too ſoon deſigns his fatal blow,
To crop the flow'rs, which wither as they grow.
Thus Art to mortals ſhews the book of fate,
Where cowards may their doom anticipate.
Has *Hunter* ſhewn how babes fill every vein,
Suck in the womb, and fortify the brain;
How ſtamp'd on each created living breed,
The leading marks diſcover ev'n the weed?
The drugs that *Bulkley* ſells, or *Jones* refines,
Flies, plants, and cochineal have varying lines;
Up to proud man, who, ſov'reign lord in name,
Calls God moſt high deſigner of his frame.
This truth will *Campbell* feel, and *Thynne* impart
In feeling language ſuited to the heart;
That ſcience beſt refines the joys of ſenſe,
And proves in all the wiſe Omnipotence!

What

perfection in taking off men and animals as they really are, in the various attitudes required; to mark the common effort of all the limbs and parts, tending to one united motion of the whole creature, and proceeding from an over-ruling will, puſhing on, in perfect concert, every particle that contributes to perfect his views.

The very intention, as well as the act of moving, ſhould alſo be aſcertained and delineated by a good painter, who knows that all theſe circumſtances cannot be properly repreſented without an adequate knowledge of the bony and muſcular ſyſtems.

In ſhort, how many objects would never have been copied upon canvaſs, braſs, or marble, had not the diſſector paved the way through that labyrinth which forms the ground-work of the whole animal creation? Without ſuch light, an artiſt would reſemble a man blind-folded, with his genius blunted, and brilliant ideas ſtifled before their birth; for,

---

What glorious works are ſeen in every page
Of Nature's volume, teaching youth and age,
Clear as the ſun, refulgent light of day,
That darts at mortal eyes his ſacred ray.
Let, then, the ſtudy of mankind be freed:
To ſtrike the lifeleſs boſom, think, and read
The records of creation, with the ſtore
Of beings, quick or dead, in days of yore;
For, tracing out the ways of Providence,
Knowledge will yield fair Virtue's recompenſe.

unleſs

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For, tracing out the ways of Providence,
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unleſs

unleſs he knew the exact length, form, and uſe, of every muſcle, it would be quite impoſſible for him to take off juſtly any motion depending on inward ſprings.

ESSAY

ESSAY II.

On the Dimenſions of the Human Body, and Diſtinctions, according to Age, Sex, and Country.

BY fair proportions of the human frame, we underſtand due ſymmetry, or juſt meaſure of each part, compared to the whole; together with their reſpective connections, relative to the different uſes of all parts.—In this reſpect Nature varies infinitely, as ſhe does in all her works; for, comparatively ſpeaking, we find that the ſame members will not be found of equal ſize in two perſons, nor always a man without a limb, or ſome other particle, ill matched with the reſt.

Authors who have treated the art of Painting, have laid down ſure rules for the purpoſe of aſcertaining juſtly all thoſe meaſures upon a general ſcale; yet the ſtandard of excellence, thus formed from obſervations, does not only originate in a variety of good models, but is likewiſe the effect of true taſte, founded on our innate knowledge of conſcious natural beauty.

Thus, when Zeuxis was at a loſs how to furniſh a picture of Helen, he reviewed the moſt celebrated Sicilian beauties; choſe one perfect leading feature from

from each of them, and mingled all their charms to form the fair paramour of Paris.

In like manner Phidias, the ſculptor, united in Jupiter's ſtatue the various perfections of a thouſand living models.—It was in the ſame way that the moſt ingenious men of ancient Greece tranſmitted to poſterity a criterion, by which we have learnt to value Nature's glorious works. Conſequently Grecian ſtatues, being mere copies of human figures, are conſidered as diſplaying an original type of perfection, far exceeding what is ever found in a ſingle living individual. Hence came the rules of beauty adopted by painters, and too numerous to require a particular diſcuſſion in this ſtage of our inquiries.

The Variations are according to age, ſex, and country. At the critical period when Nature communicates the ſpark of life, her ſyſtem is inviſible. In vain would the curious eye attempt to penetrate her wiſdom in the firſt ſtage: nor is it poſſible for a painter to penetrate the great work in embryo. Let us, therefore, paſs it over in reſpectful ſilence until the time of maturity, when it preſents a ſubject to be conſidered in three points of view.

Infancy extends from a child's birth till it is twelve years old. The middle term is when his figure begins to appear in ſuch a ſtate of innocence as commands the limner's attention. In the firſt, ſecond, or third year of exiſtence, the feeble frame is not ſo completely formed as to be called perfect.

More

More promiſing than beautiful, the infant then exhibits only a faint ſketch of his future ſelf.

At ſix or ſeven years of age his childiſh looks give way to ſigns of growing youth.

But were a painter to know no more of his profeſſion, than merely to diminiſh the different proportions in all the members of the human body, without making an allowance for the difference of age, he would draw the likeneſs of a little man when he attemped to furniſh the picture of a child. For inſtance, in a full-grown lad, the *os pubis* is in the middle of his body; but when he came into the world, half his meaſure was at the navel.

There are other diſtinctions peculiar to childhood. New-born infants have the head diſproportioned to the other parts, with plump cheeks, hands puffed up, arms, legs, and thighs *en enbonpoint*. Their muſcular fibres are ſeparated by a ground-work of ſlight ſtrings, interwoven in ſuch abundance as prevents them from giving full tone to the muſcles, and ſtretching their tender limbs.

In drawing an infant, the ancients were mere bunglers, although they excelled in painting a full-grown perſon. Their clumſy diminutive figures prove, beyond doubt, that they had few opportunities of ſeeing perfect models of childhood, but were ſtruck with the conſtant ſight of the moſt athletic and handſome Greeks at the olympic games, and other diverſions of their days, where they appear to

the greateſt advantage. Nay, among modern painters, Domenichini was the firſt who gave to the pictures of babes, that grace, and thoſe delicate touches, which Nature has laviſhed on them. He ſeized that true likeneſs which his predeceſſors could not attain.

It is in their ſixth or ſeventh year that children exhibit a fine but unfiniſhed ſketch of MAN; and as it is only then that they begin to grow handſome, people who are nice upon this point agree in opinion, that they ought not to ſit for their pictures at an earlier period, according to the cuſtom of former times.

At that early age, a living beauty ſerved as a model for Cupid's much admired ſtatue at Theſpia, equal to the Venus of Medicis; and a comely laſs, not younger, ſat for a picture of the Goddeſs of Love, drawn by Hannibal Carracci, and repreſenting Danaë, while Jupiter deſcends in a cloud with a ſhower of gold.

While boys and girls are growing, their ſtature increaſes gracefully, more in height than breadth, or bulk. The limbs are ſlim, the muſcles are diſentangled, the whole human frame by degrees diſcovers the fair mould wherein it was turned without a blemiſh. When the full natural ſize is attained, a comely complexion receives freſh embelliſhments from a cheerful mind, good living, and a conſtant

flow

flow of ſpirits. Having reached the higheſt enjoyments and moſt pleaſing endearments of life, man then diſplays his vigorous and majeſtic form, as lord of the creation.

Manhood is equally marked with ſuch ſtriking ſhades of variations as will not eſcape a painter's eye. At that period, corpulency often overſtrains features, once ſo regular; the limbs become unwieldy, while the muſcles are encumbered and checked by changes affecting the whole ſyſtem: yet, much as an exceſſive corporation diſfigures the lines of grace and elegance, a moderate ſhare of comelineſs is very becoming.

Men do not paſs rapidly from the vigour of life to the vale of years. If at fifty they begin to go down hill, they frequently wear ſo well as not to be old in conſtitution.

It is, however, about that age, and until the ſixty-fifth year, that their decline is firſt perceptible. Plump and jolly looks give way to wrinkles: for want of ſufficient elaſtic tone through the whole frame, the ſkin, like cloth, takes a rougher plait, particularly on the cheeks and forehead. At laſt a bald, furrowed brow; a pale, ſhrivelled, toothleſs face, and bones jutting out, are ſigns of approaching diſſolution. Even the ſtature diminiſhes. A giant's ſpine, or main pillar, ſinks under the weight of years. His muſcles become too weak to glue together that chain of Nature's ſyſtem; the joints of

his legs and arms, being grown ſtiff, refuſe to perform their duty.

Other ſymptoms of final decay announce a ſkeleton by anticipation, while death waits in ambuſh, impatient for his prey.

Let us return, with due reſpect, to the fair ſex.

A perſonable woman, well ſhaped, is more ſlender, and has ſlighter bones, than a man; her ſtature is likewiſe ſmaller, the neck longer, with the lower part of the breaſt narrower.

The baſe or circumference of Venus, taken in one point of view, is alſo broader, compared with the form of Apollo. Her thighs are thicker, her legs ſtouter, her feet ſmaller, her muſcles leſs viſible, and her limbs more elegantly turned, in addition to a ſet of features and complexion peculiar to the beautiful object of wedded Love.

In the next place, we come to conſider the material difference depending on climate, with regard to the ſize and colour of people.

A good painter will not, we know, draw a Patagonian like a Laplander, nor make an European reſemble an African blackamoor. He will take off the national diſtinguiſhing feature perceived in every country. In his pictures, the Frenchman, the Engliſhman, and the Circaſſian, muſt appear as they really are, formed in Nature's faireſt ſhape; while the Calmouck and Greenlander ſhould be repreſented in their true light, with diminutive eyes,

ſhapeleſs

ſhapeleſs faces, and hollow noſtrils. The Carribee ſhould likewiſe be diſtinguiſhed by his flat ſkull and piercing eye.

Some diſtinctions are merely artificial. We ſhall ſlightly mention inſtances of particular caprices.

The original inhabitants of Guiana look upon a long neck as a deformity; they, therefore, begin betimes to take great pains in making that part fall into the breaſt, ſo as to bring their ſight upon a level with the ſhoulders.

The native Peruvians and Braſilians bore their noſes, noſtrils, lips, and cheeks, for the purpoſe of wearing fiſh-bones, plumes of feathers, and other ornaments; while others pierce thoſe parts and their eye-lids with needles, or wear very large rings around their mouths.

The Omaguas flatten the faces of their children, by preſſing them between two boards. Boring a large hole in each ear, they adorn it with a noſe-gay of flowers or herbs; and this faſhion of extra-ordinary ears prevails in all oriental countries.

The Hottentots bruiſe the noſes of their children; for to them a too prominent ſtriking feature would be a deformity. Both ſexes blacken their ſkins with greaſe and ſoot.

The inhabitants of Nicobar daub their countenances with green and yellow paint, and dye the the hair of their children with coarſe vermilion.

The wandering Arabs, and ſome African women, paint the chin and lips with an indelible blue; adorning other parts of their bodies with fantaſtical figures, in the ſame colour.

The Moguls tear up their fleſh into the ſhape of flowers, like the effect of cupping-glaſſes; and, being painted with the juice of roots, theſe ornaments make their perſons reſemble a piece of coloured manufacture.

The Tunquineſe and Siameſe blacken the teeth with a kind of varniſh, pretending that their natural whiteneſs is unbecoming, ſince it puts man upon a par with other living creatures; and, in order to make this whimſical change durable, they ſubmit to an abſtinence of ſeveral days under that painful operation. But theſe ſavages, and the negroes on the coaſt of Guinea, have a ſtill ſtranger cuſtom, which is, to run the noſtrils through with a peg about four inches long, and of a finger's breadth; ſo that its two ends, touching the cheek-bone, apparently diminiſh the ſize of the noſe: they likewiſe wear ſtill larger pins in their ears.

Every ſimilar cuſtom increaſes the natural deformity of people far removed from the ſtandard of perfection, conſiſtent with our ideas. Indeed, nature ſeems to have treated them as ill-favoured children of a croſs ſtep-mother. In point of taſte, they furniſh no models in their dreſs, caprice, ignorance, and habits of life; for, accuſtomed to ſee their

their own frightful ſelves, their eyes cannot be improved to the level of beauty; nor can they diveſt themſelves of prejudices ſo deeply rooted, and early ſucked in, as we may ſay, with the mother's milk.

If we viſit the northern regions of Europe, Laplanders, Samoides, Bozandians, Greenlanders, Eſquimaux, and others, will be found to differ only in ſhades of uglineſs, having the face broad and flat, the noſe ſmaſhed, eye-lids drawn out towards the temples, very large mouths, thick lips, high cheeks, thick and ſhort heads, ſqueaking voice, ſmall ſtature, ſquat and lean, and ſeldom above four to four and a half feet high.

Nor are the different inhabitants of Tartary handſomer than thoſe juſt now deſcribed. The Calmoucks, particularly, may be called ſuperlatively ugly; having their faces ſo flat and wide as to leave an intermediate ſpace of five or ſix inches between their eyes, which are extremely ſmall, and with a noſe ſo flat as to exhibit only two cavities for noſtrils. Their upper jaw is ſunk inwards, and the lower one juts out in ghaſtly horror. They are equally remarkable for large and thick knees, turned outwards, with feet bent in an inward direction. Their uſual miſerable fare agrees with the rougheſt appearance.

Near Davis's Streights, the Laplanders and their neighbours are of a ſmaller ſize; a nut-brown complexion, with ſhort and thick limbs.

The ſavages of Hudſon's Bay, and on the coaſt of Labrador, have their faces and bodies almoſt entirely covered with hair; the countenance flat and wide, large eyes and flat noſes.

Superior to all theſe, the inhabitants of New Holland improve their frightful uglineſs, by drawing the two upper fore teeth. They have eye-lids half ſhut in, from the cuſtom of uſing ſuch a defence againſt the malignant bite of gnats.

Thick lips, broad and flat noſes, buſhy hair, black teeth, with diſtorted countenances, are the features which characterize the Papous and inhabitants of New Guinea. In our eſtimation, the fair ſex there hardly deſerves this appellation; with coarſe looks large bellies, ſlight limbs, and monſtrous breaſts. Whim, not reaſon, ſeems to direct their motions and courſe of life. Like brutes, they are lazy, cruel, ignorant, and untractable; having no juſt notions of right and wrong, perfection and deformity. The ſame diſorder that diſtinguiſhes their perſons, is a leading feature of their moral character. In ſhort, they are arrant thieves, who ſet no bounds to the indulgence of their moſt vicious appetites.

Among the dwarfs and nobility of Calicut, there is a ſpecies of men whoſe legs are as large as bodies of the common ſize; but ſome of them have only one over-grown limb. Theſe thick-legged beings are common in the iſland of Ceylon, where they pride

pride themſelves upon ſuch excellence as does not diminiſh their ſtrength and activity.

The Turks, Perſians, Moguls, Chineſe, and other eaſtern nations, would not have ſuch ſtrong claims to beauty and ſymmetry, were it not for a well-known circumſtance, that, ſharing our conceptions of what is moſt pleaſing to the eye, the higher order among them betrays a concern for embelliſhing the human race, by conſtant marriages or connections with the fineſt females, dearly-bought Greeks, Georgians, Circaſſians, &c. &c. Thus the maſs of population has been purified by partial emigrations, extended commerce, and conſequent intercourſe between the various claſſes of mankind.

ESSAY

ESSAY III.

On National Cuſtoms, Dreſſes, and Ornaments, which change, hurt, diſtort, or diſfigure the Human Species.

THE local diſtinctions pointed out muſt be familiar to an hiſtorical painter; and when we conſider that the bones form a column that entwines the human ſtructure, our minds will be fully impreſſed with the importance of anatomy as connected with painting and phyſiology.

Hence appears the neceſſity for a ſtudent to be converſant with the whole chirurgical ſyſtem, as it reſpects the prevailing proportions in all parts of the globe.

Partial ſymmetry alone does not form beauty, for perfection conſiſts of ſeveral juſt, united proportions.

For inſtance, when the muſcles are ill matched, they cannot contribute to graceful motion. Something inexpreſſible is then miſſed, from a want of concert in moving the body; and this defect is perceived when the conſtitution becomes impaired by ſloth, neglect, or bad habits.

In regard to dreſs, pomp, and ornaments, faſhion has frequently proved injurious.—Children are differently

ferently ſpoiled: in ſome parts their noſes are broke down, or ſtretched out on the ſides, by heavy braſs rings, while their ears are lengthened exceſſively by the like irritating operation. Nor are they leſs tortured in a ſort of preſs, uſed for ſmoothing, poliſhing, or enlarging their heads, according to the caprices of parents.

Thus, in China,* the principal charm lies in a ſmall foot. Mothers there take particular care to ſtop the growth of that uſeful limb. This ſingularity is accounted for by eminent writers who have viſited that eaſtern country.

We, however, need not travel ſo far to look for extraordinary or fantaſtic modes, nor even among the wildeſt tribes, ſince poliſhed nations furniſh ſufficient examples of the abuſe of taſte and judgment

* It is ſuppoſed that the Chineſe firſt placed an extraordinary value on ſmall feet from motives of jealouſy. Without thinking of bad conſequences, mothers began betimes to bind, ſwaddle, and wrap up their daughters in ſuch a manner as prevented them from ſtirring out of doors, or walking upright, without attendants. Hence proceeded that unnatural form, which was ſoon rendered ſo familiar, as to become, in their eyes, the ſtandard of beauty. In the ſame way we find the Venetian ladies doomed to a cloſer retirement than what they would probably ſuffer, were it not for the inconvenience of large pattens. Such ſtrange faſhions are not eaſily left off; nor do French manners gain ground in any country ſo faſt as thoſe principles of liberty which have never been entirely eradicated from the human breaſt.

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in wearing apparel introduced into the higheſt circles: for, is it not equally by binding, ſqueezing, or wringing their feet, that European ladies are elegantly ſhod, ſo that their ſupporters can ſcarce keep up the upper works of their pretty perſons?

Nor can the ſuperſtructure be ſolid, if the pillars on which it ſtands are ſeen to totter under the weight of faſhionable ſuperfluities.

Hence proceeds the affecting ſight of ſo many tiny living figures, which otherwiſe might have been ſubſtantially formed, in courts and cities.—Even their gait, as well as their whole appearance, betrays evident marks of thoſe reſtraints which they have ſuffered from the cradle, eſpecially by the gilt and brilliant ferrets which they diſplay. It is, nevertheleſs, true, that, without ſuch embelliſhments, they might not captivate weak, effeminate men, like themſelves; but their perſonal attractions would be ſo much the more ſtriking, were every natural perfection ſeen undemoliſhed by art.

When we reflect coolly upon ſome of the uſual diſtortions, it muſt be admitted, that a thinking ſtranger cannot ſee, without pitying, a charming girl who walks on tiptoe, and ſtrives in vain to conceal how much ſhe ſuffers in her nerves, fibres, and tendons, from the preſſure of bands, calculated to preſerve delicacy as preferable to health.

Conſequently, in the ſtate of pregnancy, ſuch feeble creatures are unable to keep the balance for taking

taking exercise suited to their situation. The fatal effects of this pining sickness are sufficiently known to tender husbands and good fathers; yet it is acknowledged, that, in order to appear of the middling size, women would have no need of high heels, were not their growth interrupted, and their knees disjointed, by those abuses to which fashion has given a sanction, to the prejudice of beauty.

Equally pernicious to infants are too tight swaddling clothes, against the laws of Nature, at a moment when, coming out of a prison (the womb), they should feel no shackles ill suited to their tender age.

Nothing afterwards impairs the constitution so much as stays, or other trammels, which high examples have introduced among the middling classes of society. Nor need we seek farther to account for those affected airs, timid looks, and careless steps, which distinguish the *ton*, or polished manners, of the higher ranks; although, in fact, they proceed from sloth and indolence, acquired by such bad habits as destroy natural graces.

Will mankind, then, never agree in forming just conceptions of a beautiful figure?

The ancient Greeks differed materially from the moderns in their ideas on this important point.

Born under the finest canopy of heaven, the inhabitants of Greece formerly gave full scope to Nature, by using such slight dresses, and continual exercises,

ciſes, as promoted health, ſtrength, and ſymmetry. Thus ſculptors had their eyes familiarized with living models of excellence, in that ſtate of ſimplicity, from which they deſigned inimitable ſtatues.

But now-a-days we could not eaſily find in the higher order ſimilar perfections, in the ſame degree as amidſt that laborious claſs, which ſtill contributes to embelliſh the human frame by rural employments, races, and diverſions, uſed with moderation: but for theſe, the plagues of luxury and effeminacy would make the human race degenerate more viſibly, or dwindle into ſhadows.

On the other hand, exceſſive labour would have a contrary effect upon both ſexes, and prove fatal to the niceſt ſhapes and faireſt complexions; as every man may obſerve, that female peaſants loſe the fine tincture of a ſkin, with well-turned tender limbs, juſt as they gain additional vigour with robuſt and athletic ſhapes. But, in the populous towns of Europe, beauty, like a flower, requires our foſtering care, to prevent it from periſhing by a cruel blaſt before it be full blown.

ESSAY

ESSAY IV.

Diſcuſſion of the Queſtion,— Whether Anatomical Knowledge might be acquired ſufficiently without Diſſection? Remarks on the Sports, Diſcipline, and ſurgical Principles of the ancient Greeks.

WHILE a ſufficient degree of anatomical knowledge tends to aſcertain juſt proportions, it behoves a painter and phyſiognomiſt to be well acquainted with the muſcles, as on them depend a variety of forms and poſtures. On this occaſion it becomes a queſtion deſerving our ſerious conſideration, Whether a courſe of ſuch ſtudies might be purſued equally well with or without mangled bodies, diſguſting to refined feelings?

Inſtead of diſplaying openly the muſcular mechaniſm upon a lifeleſs ſubject, might not the ſame uſeful purpoſe be anſwered, were we to ſet up, as objects of ſtudy, thoſe excellent ſtatues which are ſuppoſed to point out every diſtinction in a true light? Beſides, we have perfect figures in wax, on which every ſhade of Nature's colours is duly preſerved.— Or can we diſpenſe with diſſection, by ſubſtituting living

living ſubjects, whoſe attitudes, mien, and motions, might ſerve as imitable marks?

However plauſible the objections to anatomy might appear, they would prove in Reaſon's eye to be frivolous pretences, ſuggeſted by lazy ſtudents, adopted by men of middling abilities, and deſpiſed by the moſt celebrated profeſſors; for, upon reflection, it muſt be found, that, perfect as figures in braſs, wax, or marble, may be in the likeneſs of an original, they do not diſcover the Supreme Deſigner's inward machinery, in a manner ſuited to all thoſe violent evolutions and forced ſituations which a living model could not bear. Or, even were it otherwiſe, we could only judge of effects apparently, without tracing them to their real cauſes, as we can do upon bloodleſs bodies, with the inexpreſſible ſatisfaction attending every gradual diſcovery, which enables us to account for the ſlighteſt viſible variation in ſuch parts as become objects of contemplation or imitation.

It is after having ſtudied in this manner, that a pupil ought to attain a proficiency in drawing, before he ſhould be permitted to uſe thoſe ſubſtitutes for ſkeletons, which Art has ſo numerouſly multiplied for his uſe; at the ſame time he would retain in his memory the principles of oſteology, retraced by the ſight of living creatures, whoſe geſtures might be rendered a ſubject of daily obſervation, to

prove

prove what he previouſly knew in theory and from demonſtration.

With ſuch a fund of information, the ſtudent would do well to improve himſelf by copying ancient ſtatues, with hopes of imitating, in ſome meaſure, their beauties; for, by theſe fundamental accomplihments, he might clearly ſee the way before him in his profeſſion, and be ſoon able not only to delineate juſtly all the muſcular motions, but alſo to explain the cauſe and main ſprings of every geſture in a maſterly manner.

It remains for us to refute another objection which might be ſtarted againſt the abſolute neceſſity of anatomy, from a conſideration, that without this ſcience the Greeks produced maſter-pieces. But if hiſtorians do not dwell upon their ſkill in it, we are at liberty to entertain doubts about their ignorance in that reſpect; eſpecially as it was impoſſible for them to ſucceed ſo well in every imitation of Nature, unleſs they had poſſeſſed ſecrets unknown to their poſterity.

In the moſt remote times of antiquity, bodily exerciſe was ſo much the more common, as the united ſtrength of individuals compoſed the power of a nation. The fate of an empire then depended on the iſſue of a ſingle combat between one man and another; juſt as each could wield the firſt arms uſed in the field, before they had dared to imitate the thunder of heaven, or invent eaſier means of

deſtruction. Under ſuch circumſtances, it was the policy of every inconſiderable ſtate to train up and harden the race of men, in order to form an invincible barrier againſt the incroachments of a powerful neighbour.

Several wiſe inſtitutions contributed to that ſalutary end in Greece, where every poſſible diſcipline was moſt perfect. Giants were reared to withſtand the torrent of invaſions from Perſia. The Olympic Games were mere trials of ſkill and dexterity, preparatory to the famous battles of Marathon, Thermopylæ, and Salamine. The public feſtivals were recreations equally calculated to raiſe that generous ſpirit of emulation which is ſo neceſſary to animate contending armies, and make men devote themſelves to conquer or die.

Thus it was that, by continual activity, a people weak in numbers became a ſtrong rampart, capable of reſiſting the innumerable forces which poured in upon them from Aſia: nor could the Greeks have maintained their independence with ſo much honour and glory, had it not been for that education and mode of living which promoted elaſtic agility and gigantic force in their civic tournaments and military exploits, where national pride and perſonal bravery were excited by the higheſt allurements.—Indeed, it is impoſſible for us to conceive an adequate idea of the Racer, the Charioteer, and the Wreſtler, contending for victory in the high-day of blood.

Happy

Happy then was the painter or ſculptor, who ſaw the beſt models of champions and warriors ſtripped of ſuperfluous fineries, and preſenting, in every anxious attitude, ſubjects of lectures on the human conſtitution.

Another opportunity to cultivate the fine arts was derived from a variety of laudable diverſions, fitted to youth of both ſexes, who, in the ſtate of innocence, preſented their natural graces, which excited the ſtrongeſt emotions, without raiſing a bluſh at Lacedæmon.

If, therefore, ſome profeſſional gentlemen would exclude anatomy from a juſt rank in the ſcale of ſciences, it muſt be granted, that they might procure a compenſation for the deficiency, were it in their power to eſtabliſh ſuch popular Aſſemblies or Muſeums as the Grecians had, for experiments on the ſyſtem of Nature, which they muſt have ſtudied with the greateſt advantage, as they have tranſmitted to us the moſt ſtriking proofs of their ſuperior workmanſhip. Finally, we conclude that they could not have attained that degree of eminence without ſome anatomical principles, though perhaps differing from our refined ſyſtems.

ESSAY V.

On Grace and Beauty.

THE impreſſions made by Beauty and by Virtue are alike: we acquire the ſame conſcious ſenſe of bodily perfection and moral rectitude in both caſes, where our feelings act in concert with our judgment in forming an eſtimate of their relative value. Our juſt conception of true excellence is proved by the immediate delight that it affords in gladdening the heart, while, on the other hand, extraordinary deformity raiſes the involuntary ſmile of deriſion, when it is not reſtrained by pity, reſpect, or reflection.

Infanity, or other defects of the mind, do not ſhock us more than ſingular features;—too prominent a noſe, ill-matched eyes, a figure like Don Quixote's, crooked limbs, and projecting ſhoulders: ſuch a ſight creates either compaſſion, ſlight, or indifference.

The beauties of the ſoul and body bear likewiſe a reſemblance in their changes, being affected by the ſame cauſes.

Violent paſſions, anger, jealouſy, hatred, envy, convulſe the body, and diſturb the mind; diſfigur-

ing

ing the countenance, and at the same time injuring the health.

Plato considered in the first rank of Nature's blessings, a superior understanding; and, in his estimation, beauty had the second place; for he preferred it to all the gifts of fortune, birth, and power. —"If," says he, "Youth and Beauty had Prudence on their side, they would be still greater objects of adoration."

The Greeks erected temples to *Venus*, whom they worshipped under different names.

In their language there is but one word, *Cosmos*, to signify the World, Beauty, and Symmetry. It is to their high idea of perfection that we must attribute the superiority of every work that is come to us from their hands; no less visible in their poetry, than in the monuments of arts which have escaped the ravages of time, wars, and revolutions.

The inference to be drawn from these reflections is this,—that the best moral writers, the most celebrated poets, and the most perfect architects, were cotemporary with those sculptors and painters, who likewise stood the foremost in repute in their professions. Thus Homer, Pythagoras, Socrates, Plato, Eschylus, Demosthenes, Sophocles, and Euripides, were the friends and rivals in fame of Phidias, Apollodorus, Agathias, Agesander, Parrhasius, Protogenes, Zeuxis, and Apelles. In order to render wisdom amiable, that ingenious people deified this

attribute as peculiar to Minerva, the daughter of Jupiter, one of the moſt beautiful and powerful Goddeſſes, who partly owed her influence to perſonal charms.

Indeed, without ſtudying the animal ſyſtem, all attempts to make a conſiderable progreſs in the fine arts would prove ineffectual, for the ſuperior excellence of a figure or ſtatue lies in the perfect union of grace and beauty. Such perfection may be ſaid to conſiſt of the moſt regular human forms, relative to the reſpective motions of all parts; and, in addition to this ſtriking ſymmetry, the graces which ſet it off are better felt than deſcribed by every man of taſte who is impreſſed with ſomething inexpreſſible, ariſing from a cloſe connection between the movements of the body, and thoſe agitations of the mind which he cannot ſuppreſs, while he views the moſt exact proportion of every part completely united in the harmony of a whole pleaſing object of love or admiration.

ESSAY

ESSAY VI.

Upon Expreſſion, or Character, in Painting, &c.

REGULAR proportions, ſymmetry, and elegance, are not the only requiſites to form a perfect figure.

Without a juſt leading feature, that characterizes the ſubject repreſented on ſtone or canvas, neither the fineſt colours of a painting, nor the perfect harmony of a ſtatue, will meet with the approbation of real judges.

Expreſſion, then, is the ſoul of both; the lively and ſtriking image of animated affections, that breaks out, betraying every inward emotion, in ſtrong characters, ſtamped upon the countenance, and communicated by that ſwell and relaxation of the muſcles by which the ſecrets of the heart tranſpire, more or leſs, according to the lineaments and degree of conſtitutional vigour.

Even the reviewers of paintings ſhould be forced to ſhare the impreſſions ſo repreſented in a maſterpiece, after a magical invention that few profeſſors communicate cheerfully to their pupils.

It is, therefore, indiſpenſable for the artiſt to ſtudy man in a moral point of view; to ſift into the inmoſt

receſſes of his breaſt, in order to ſee the paſſions, and give life to his repreſentation, without miſſing a ſingle ſhade that characterizes the original, juſt as much as he is diſtinguiſhed by the features of his face.

His progreſs in this branch of the imitative arts will be favoured by a fruitful imagination, ſkill in drawing, with a juſt diſtribution and force of colouring. Thus he will obtain the lively ſpark that Prometheus ſtole from Heaven, to animate brittle clay, the boaſted work of his hands. It is, then, by the particular excellence of affecting and ſpeaking figures, that Painting holds a rank among the ſciences as the Siſter of Muſic and Poetry.

ESSAY VII.

On the Paſſions.

SECTION I.

LET us caſt a glance at the origin and diviſion of the Paſſions, before we conſider their different outward ſigns.

No ſtudy would be more intereſting to man than to analyſe himſelf in a moral ſenſe, were it poſſible for him to do ſo. The moſt enlightened philoſophers have differed upon this point: ſome of them maintain the prevailing opinion, that this thinking creature is born good, without thoſe fatal paſſions of which he becomes the ſport, as they originate entirely from education, example, and circumſtances. According to this ſyſtem, he brings with him into the world the precious ſeeds of virtue and juſtice, which are deſtroyed in the bud by bad habits and difficulties of life; ſo that vice grows up in their place.

Beſides other advocates, the celebrated Rouſſeau employed his perſuaſive language in defence of theſe principles. Oppoſite ſentiments, leſs flattering to human nature, have been ſupported with equal zeal, but more ſpleen than good ſenſe, tending

ing to propagate the ſhocking idea,—that all men are born wicked and cruel; ſo that force alone being the rule of power which made the firſt law, they partake equally of a longing deſire to poſſeſs the ſame objects, and conſequently are in a ſtate of warfare from their infancy to the grave.

Hence ariſes the perpetual conteſt that ſpreads ſuch havock and deſolation upon the earth.

Another modern philoſopher, Helvetius, after having confuted theſe doctrines with ſolid arguments, has endeavoured to hit the right medium between two different ſyſtems, without indulging the ſpirit of contradiction. He maintains, that a child comes upon the ſtage of life neither good nor bad, but becomes either according to events From the moment when he breaks out of his mother's womb he opens the gates of creation, and enters without thoſe ideas and paſſions, the mere effects, or impreſſions, of his exiſtence.

Agreeably to this way of arguing, ſelf-love, the ſtrongeſt leading principle, conſidered as innate, is only a main-ſpring of action, acquired from experience and recollection of pain or pleaſure, from the earlieſt period, added to the fruits of reflection at a riper age, when we come to contemplate and weigh the whole order of things in the ſcale of Reaſon.

Section II.

On the Diviſion of the Paſſions.

Philosophers have diſplayed no leſs ingenuity in arranging the order of the Paſſions, than in tracing their cauſes, by dividing the whole into two claſſes, the ſimple and the compoſite.

In the firſt claſs they reckon Admiration, Love, Hatred, Grief, &c.; in the ſecond, Reverential Awe, Fear, Courage, Hope, Deſpair, Longing, Rage, &c.

Such is the arrangement approved of by the celebrated Le Brun; but, with all due reſpect for the memory of ſo eminent an artiſt, we are inclined to contradict it, as founded, in ſome inſtances, on fancy or conjecture: for why is hatred more ſimple than rage; or how does hope or deſpair appear to be more a compound than joy or ſorrow?

Dandré Bardon makes four diviſions of Quiet, Agreeable, Painful, Terrible, or violent paſſions; which ſtrikes us as a more juſt and natural way of drawing the line of diſtinction. On this occaſion a doubt might be ſuggeſted reſpecting the propriety of adding to that liſt ſome of the other gales which ruffle the human mind,—ſuch as Suſpenſe, Timidity, Contempt, and Deriſion.

It

It was probably the difficulty of aſcertaining theſe various agitations, that induced Watelet to adopt another method, in the judicious obſervations following his Poem on the Art of Painting.

He divides the Paſſions into ſix different branches, of which each has ſeveral diſtinguiſhing ſhades. For inſtance, Melancholy is the conſequence either of misfortunes or of compaſſion; but it has various gradations by which it is particularly marked and pointed out to diſcerning eyes. Every ſhade of difference bears ſomething peculiar to it, ſuch as—

Anxiety, uneaſineſs, regret;
Vexation, peeviſhneſs, languor;
Dejection, reſignation, oppreſſion, &c.

Joy, the ſecond principal paſſion, has ſeveral degrees:—

Satisfaction, ſmiles, and laughter, occaſioned by mirth;
With demonſtrations in geſtures, ſinging, and dancing;
Convulſive fits of laughing;
High glee, tears, embraces;
Mad pranks and raptures, reſembling the ſtate of intoxication.

Grief, produced by bodily pain, has alſo its proportioned variations, according to the degree of

Senſibility, pricking, griping;
Torments, pangs of death, and deſpair.

Sloth,

Sloth, or indolence of body and mind, produces the following ſituations:—

Suſpenſe, or irreſolution, timidity;
Oppreſſion of the ſpirits, diſtruſt, or apprehenſions;
Fear, flight, fright, terror;——and,
Ghaſtlineſs.

Impreſſions of an oppoſite nature proceed from—

Strength, courage, ſteadineſs, reſolution;
Aſſurance, intrepidity, and audacity.

The Loſs of any thing dear to us, Contradiction, or Diſappointment, generally excite envy, jealouſy, and averſion, in the following gradations, viz.—

Indifference about a perſon that has given offence;
Diſlike, irritation;
Threats, diſdain, contempt, raillery;
Antipathy, ſpite, inſult;
Anger, rage, vengeance, and fury.

Such is the diviſion of Paſſions arranged by that eminent writer, according to their natural order, and in ſuch a manner as to form a ſcale of the different emotions to which our minds are ſubject.

But in what claſs muſt we place the paſſion—by turns ſoft and violent—Love, whoſe temptations are ſo pleaſing, and whoſe tranſports are ſo fatal? The ſame intelligent Poet ſays, that this affection ſhould be repreſented, by mingling the traits of timidity, embarraſſment, agitation, languor, admiration,

ration, longing deſire; a panting breaſt, with eyes alternately ſparkling, and rolling in tears; the faireſt incarnation, blooming features, expreſſing impatience, with a flutter like the quaking fit of an ague, followed by ſighs, anxiety, and raptures.

Our next delightful taſk is to conſider the characters in which all theſe ſenſations are ſtamped upon the countenance, ſo that every motion of the ſoul tranſpires by the action of the nerves, fibres, and muſcles; which it would be impoſſible for an artiſt to repreſent properly, unleſs he was well acquainted with the interior machinery of the human figure, hereafter explained. This demonſtration muſt carry conviction with reſpect to the advantages that the fine imitative arts derive from anatomy.

ESSAY

ESSAY VIII.

On Man.

OF all living creatures, Man is the moſt perfectly framed by Nature in every reſpect.

He comes into the world ſtraight, without defenſive arms, ſpotted with little hair or down, and gradually grows to five or ſix feet in height.

His head is nearly of an oval form, with the crown flattiſh, or tapering, and covered with long locks. The fore part is of the ſame ſhape, and the hind part circular.

His face is bare; his forehead is almoſt even, ſquare, levelled at the temple, and interlined with the hair in two right angles.

His eye-brows are prominent, nicely ſeamed in towards the temples, and ſeparated by an intermediate blank ſpace.

His upper eye-lid is in motion, and the under one fixed, each having laſhes rather crooked and jutting out.

The eyes are round, and kept in their ſocket, without being faſtened by a particular muſcle. The eye-ball is round, without a twinkling membrane to preſerve it.

The

The cheeks are equally convex or roundiſh, ſoft and freſh-coloured; the jaws ſloping, and looſer above than below.

A riſing noſe, ſhorter than the lips, higher and rounder at the bottom; oval noſtrils, hairy within, and thick edges, form an eſſential part of the leading features.

The upper lip is almoſt perpendicular, with a hollow, the lower one almoſt ſtraight as a line, or curving gradually; the chin picked, plump, and roundiſh.

The male ſex has the mouth bearded, with long flowing hair, particularly at the chin.

The teeth are grafted on the jaw; the fore-teeth run cloſe in a row, more equal, evener and rounder, than in other animals: the eye-teeth are placed aſunder, longer than the others, ſhorter than thoſe of brutes, and on a level with five grinders on each ſide, flattiſh, but not with ſuch deep-rooted prongs as in the brute creation.

Bare, round, and lateral ears encircle the head like a half-moon, with the upper brim hollow, and ſoft at bottom.

The buſt conſiſts of the head, neck, breaſt, back, and belly. The trunk is headleſs, formed by thoſe other parts.

The neck is almoſt round, with the nape lightly turning; the throat hollow at top, and convex in the

the middle. The chine-bones are not joined by any ligament.

The breaſt is, in ſome degree, ſmoothed, particularly the upper part; the wind-pipe hollowed, ribs curving, and hairy; pit of the ſtomach ſmoothiſh. two paps at the breaſts, like globes, with nipples of a cylindrical form, flattiſh, wrinkled, and encloſed in a circle.

The bottom of the back is almoſt even; and between the ſhoulders there is a flat ſpace.

The belly is hollow and looſe, with an open navel; the epigaſtrium is even, the hypogaſtrium globular; the ribs even and hollow, the waiſt hairy, the tunnel of the body is wide at top, and narrower below. The difference of ſexes is conſiſtent with their reſpective characters for aſſurance and modeſty.

The arms are thick, round, and as long as the legs. The elbow is flat, but a little picked.

The palm of the hand is hollow within, while the fiſt riſes and ſpreads itſelf like a globe; with five fingers, and a thumb ſeparated from them, ſhorter and broader. The ſecond, third, fourth, and fifth fingers are cloſe to each other; the fifth is the leaſt; the ſecond, fourth, and particularly the third, or middle finger, being a little longer, and reaching down to the middle of the thighs. The nails are almoſt of an oval

ſhape, and with a ſmooth ſurface, ſurmounted by a whitiſh creſcent.

The legs and limbs run up ſtraight, as ſtrong ſupporters of the human frame.

The thick parts of the thighs are round and plump. The knees are turned within-ſide, and very flat, with the joints or pans hollow below. The legs are of the ſame length as the thighs, more ſlender at the ſhins, thin at the fore part, with thick muſcular calves, plumper behind than forward.

The heels are oblong, broader than in other animals, jutting out with hard ancles on each ſide, of a ſemicircular form. The ſoles of the feet are likewiſe oblong, round in the fore-part, even behind, and hollow croſſwiſe. with a cloſe row of five curved toes, roundiſh below; the firſt, largeſt and ſhorteſt; the ſecond and third almoſt alike; the fourth and fifth diminiſhing regularly; and nails as on the fingers.

Man differs from brutes in his upright and ſmooth body, with a covered head, eye-brows, laſhes, and ſome hair on other parts at the age of puberty. He is likewiſe diſtinguiſhed by his breaſts, a larger brain than any other creature; his palate and trachean artery; his face even with other parts; the noſe prominent, his chin picked, and legs ſupported by heels. Nor does he feel himſelf leſs favoured

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in whatever tends to the comfort of a married life, and the population of the world, being the only living creature that has received the greateſt gift of heaven—the power of ſpeech, the means of communicating his ideas, and providing for his wants in a civilized ſtate.

ESSAY IX.

On the Varieties of the Human Species.

THERE are not two kinds, but ſeveral diſtinct families of mankind. Kant reckons four human races; the Northern European, the American, the Negro, and the Tawny Indian who inhabits the banks of the Ganges.

Erxleben admits ſix different ſpecies of men;—the Northern Dwarfs, or Laplanders; the Aſiatic Tartars, living from Mount Imaus to the borders of Lapland; other inhabitants of Aſia, beyond the Ganges; Europeans, Africans, and Mexicans.

The Northern Dwarf, or Laplander, is of a diminutive ſtature, and his leading features correſpond with his brutal ſtate and habits of life.

His viſage is flat, broad above, contracted, and lengthened in the lower part, with a flat noſe preſſed down; ſmall eyes, with a ſemicircle of yellow brown and blackiſh colour about the ſight. His eye-lids are lengthened toward the temples, the cheeks exceſſively high, the mouth very large, thick lips, a ſhrill ſqueaking voice, a monſtrous head, ſleek and black hair, tawny complexion, his body thick, ſhort, and ſquat, for he is ſeldom above four feet high.

The

The Tartar is well ſet, with thick thighs and ſhort legs: his countenance is flat, and five or ſix inches broad from ear to ear; his eyes are very ſmall, and his noſe is ſuch a ſnout as exhibits two holes inſtead of noſtrils: his knees are turned outwards, and his feet inwards.

The Aſiatic is of a yellowiſh complexion, with black hair, and dark eyes: he is of a melancholy turn.

The European is fair, freſh-coloured, with light, long, and curly hair, and generally blue eyes.

The African is black and heavy; his fibres are looſe, his ſkin ſoft as velvet, his hair black and criſpy, the noſe flat, with thick lips; and the female that becomes a mother has a very long breaſt.

The Mexican has a broad countenance, a very ſmall forehead, covered with hair up to the eyebrows, and ſmall black eyes.

Camper has publiſhed obſervations upon the ſkulls and faces of different nations, by which it appears that the lines of the countenance run more awry in Blackamoors than in Europeans.

Blumenbac's Treatiſe on the ſame ſubject likewiſe contains curious remarks.

Much has been ſaid about Wild Men, found at different times in the foreſts of Europe; but they were almoſt all born deaf and dumb, abandoned

by their parents on that account, or artful impoſtors.

A real Savage, as Buffon ſays, would be an object of curioſity to a philoſophic eye able to trace all the inſtincts of pure Nature, obſerve the human mind without diſguiſe, and form a juſt eſtimate of the ſtrongeſt innate cravings implanted in his breaſt, where we ſhould probably find more peace and comfort, with a larger portion of virtue, than by ſearching the boſom of a civilized man: conſequently the reſult would be, that vice proceeds from evil communication in ſociety.

Bernard Connor, in his *Evangelium Medici*, has given us the hiſtory of a child bred with wolves. *Martiniere*, in his Geographical Dictionary, mentions a wild youth found in the foreſt of *Hanover*.

But in order to form a juſt idea of our natural powers, undirected by the light derived from a poliſhed education, let it ſuffice for us to ſtate ſome of the particulars that the younger *Racine* has tranſmitted concerning a Savage Girl, who was diſcovered near *Chalons*, in the year 1731.

It was at the Caſtle of *Sogny*, that ſome ſervants, having perceived at night what was taken for a ſpectre upon an apple-tree, they drew near quietly, with an intention of ſurrounding it; but the object of their attention ſuddenly jumped over the walls of the garden, and eſcaped into an adjoining grove,

grove, where ſhe perched upon the trees, rambling from one to another.

The Lord of the Manor in vain employed his vaſſals in the chace of that poor female. At laſt, his lady hit upon an expedient that was attended with ſucceſs:—a pail of water and an eel were the baits uſed to tempt the Savage Girl to come down, as ſhe did, to ſatisfy the ſtrongeſt calls of hunger and thirſt, like the wild brute.

Accordingly, being eaſily taken, ſhe was well treated; nor did her palate require the refinements of modern cookery.

The nails of her fingers and toes were found to have grown to the length of ſuch claws, as enabled her to climb with eaſe in the woods.

At firſt, ſhe appeared black; but the change in her way of life ſoon reſtored her fair complexion.

Knowing no language, ſhe could not pronounce any other but frightful cries, or the imitations of thoſe birds and beaſts with whom ſhe had been converſant.

Afterwards, having learnt to ſpeak, ſhe gave an account of her former habits and adventures.

The cold weather had compelled her to wear the ſkin of ſome animal indiſpenſably; but, in every ſeaſon of the year, ſhe uſed a girdle, to which ſhe faſtened a kind of round and ſhort club, for

killing wolves and other creatures. When, with this weapon, ſhe had killed a hare with one ſtroke, her cuſtom was to flay, and devour her prey; or, after over-running this ſwift game, ſhe uſed to open the veins with her nails, drink up the blood, and throw away the reſt.

Her quickeſt pace was a ſort of flight, performed by ſliding along imperceptibly, in ſuch a manner, that her body and feet hardly ſeemed to move.

She poſſeſſed no leſs addreſs and agility upon another element,—the water, where ſhe dived with all imaginable eaſe, and choſe her favourite food.

Neither her age nor her native country was ever aſcertained. Being interrogated upon one of theſe points, by ſigns, ſhe pointed at a tree, without doubt becauſe ſhe had lived in foreſts, and never ſeen any other dwelling.

With a view of diſcovering the place of her birth, *La Condamine* ſhewed to her the roots of ſeveral *American* plants, in hopes that ſhe would recognize what ſhe might have ſeen in her infancy; but this experiment proved uſeleſs.

She related with ſenſibility, the loſs of her companion, of the ſame age and ſex.

While both were ſwimming in the river (the Marne, as we ſuppoſe), they heard a report, that forced

forced them to plunge; for a ſportſman had fired upon them, inſtead of ſhooting water-fowls. Upon finiſhing their fiſhing party, they ſtrolled a good way further; and at the entrance of a wood, they found a pair of beads, which produced a quarrel, as both wanted to make a bracelet.

In the conteſt for this bauble, ſhe was provoked, by a ſtroke upon her arm, to return it with ſuch a violent blow upon the head of her antagoniſt, as made it bleed. Then, inſtantly, from a motion that natural inſtinct ſuggeſted, ſhe climbed upon an oak, and found a gum for the cure of ſuch a wound, according to her innate knowledge; but, returning to the ſpot where they had ſeparated, ſhe miſſed, and loſt for ever, the partner of her cares.*

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* As Grecian Statues require a veil ſuited to Britiſh modeſty, ſo a few of Mr. Sue's ideas may be rather improper without a ſlight gauze, whether the attempt be made in proſe or poetry to convey deſcriptions.

The preſent manners, on both ſides, require equal delicacy. Thus, in caſe any fair readers, mothers, or midwives, ſhould take up theſe Eſſays, let us pay a compliment to their ſex, as a compenſation offered for having ſuppreſſed any ſuch part, as was originally deſigned for profeſſional characters.

ON MODEST KISSES.

Is Frederick's glory worth a moment's bliſs;
Or Newland's treaſure equal to a—kiſs?

No;

No; let us die before our pleasures cloy;
While we look up to heaven for purer joy
Than what proceeds from moving scenes of life,
And living pictures of a tender wife.
At last, since Angels, pure in mind, embrace,
Let lovers buss with modesty and grace!
May Beauty's smiles reward the wise and brave,
Till female lips with their's shall share one grave.

ESSAY

ESSAY X.

On the Differences of Stature.

ACCORDING to Buffon's eſtimate, the middle ſize does not exceed five feet four inches, French meaſure; and he conſiders men as tall, from that height to five feet nine.

Women are generally ſhorter by two or three inches; and they attain their full growth ſo much the ſooner.

Haller makes five feet five to ſix inches the ſtandard for the human figure in temperate climates, where the conſtitution is not impaired by a too ſedentary life, or a bad habit of body.

He likewiſe obſerves, that in *Switzerland*, the inhabitants of vallies are taller than mountaineers. Some of the former are above ſix feet high. Are they to be conſidered as giants; or where is the line to be drawn for ſo calling them and others of equal ſtature?

A Finlander was exhibited as ſuch at *Paris* in the year 1735. He was above ſix feet eight inches.

A Life-guard in the duke of *Brunſwick's* ſervice, and *Macreath* who was ſhewn in *London* in 1760, were both above ſeven feet high.

A Swe-

A Swediſh peaſant, *Caianus*; a Finlander, *Gilly*, of *Trente*; and the king of *Pruſſia's* life-guard, meaſured more than eight feet.

Goliath muſt have been nine feet four inches in height, if we calculate it right from holy ſcripture.

Notwithſtanding ſuch authentic accounts as have been publiſhed about the *Patagonians*, and much as they may comparatively overlook other people, we cannot ſuppreſs our doubts reſpecting their middling height; nor ought it to be deemed gigantic in every individual; for if, as in other countries, a few of them have exceeded their national ſtandard, as we may call it, of ſix to thirteen feet, others might have been ſeen proportionably lower, or about that ſmalleſt ſize, on a general run.

Other ſuppoſitions have been formed upon the appearance of extraordinary bones dug up; which were either the ſad remains of brutes, or puffed up by diſeaſe, if they had really formed a part of a human ſkeleton.

There is, in the Muſeum of Natural Hiſtory at Paris, a broken bone, 2 ft. $4\frac{1}{2}$ in. long, which had been conſidered as having been part of a giant's body, until *Daubenton* proved it to have belonged to another animal.

The *Roman* Hiſtory mentions a famous giant *Teutobochus*, whoſe bones were ſaid to have been diſcovered near *Langon*, in the beginning of laſt century: they were exhibited as ſuch in France, Flanders,

Flanders, and England. A celebrated ſurgeon, *Habicot*, ſupported that opinion, which was oppoſed by Dr. *Riolan*, and is ſince exploded by *Daubenton* and other eminent men.

On one ſide of the queſtion it was aſſerted, that, upon opening the giant's tomb, a human ſkeleton was found, twenty-five feet and a half high, ten feet broad at the ſhoulders, and five feet round, with a head five feet long, and ten feet in circumference.

The objections to ſuch aſſertions are obvious to a profeſſional character.

A ſkeleton five feet high, is only thirteen inches broad, and ſeven and a half inches round. Conſequently another of five-and-twenty feet would meaſure only about three feet at the ribs, and five feet three inches at the ſhoulder-blade; where ten feet would be the juſt proportion to the immenſe height of fifty feet, in ſuch a living creature as we ſhould imagine to have exiſted. Upon that ſcale, five feet in compaſs would be proportioned to thirty-eight feet in height.

The human ſkull is generally eight inches long, and one foot ſeven or eight inches round. A head five feet long, and ten feet round, could have ſuited only an animal thirty-five feet high.

The other parts were equally ill-matched to juſtify ſuch a falſe idea as had been too lightly conceived.

The ſupporter of it pretended to have found the collar-bones two feet long; but as thoſe of a common man are only five inches, the giant muſt have been four-and-twenty feet high, according to this computation, which is pretty near the height attributed to him. This forms the principal point conteſted; becauſe, if the rhinoceros, or ſome other animals, have no ſuch bones, there is no other but man that could have them of that dimenſion.

But as they were ſoon reduced to aſhes, upon being brought into the open air, there is a ground of doubt whether the whole was properly examined before Credulity had found partizans ready to propagate the common report on that ſubject; and ſince men of that deſcription, who ought to have been better informed, have given credit to ſtories of this nature, we ſhould be upon our guard againſt all vulgar notions when they do not ſtand the teſt of chirurgical experiments.

In order to admit the real exiſtence of a gigantic human race, we ſhould ſuppoſe that the wiſdom of Providence would have been equally diſplayed in forming the moſt uſeful part of the brute creation upon the ſame grand ſcale; particularly horſes, whoſe weight, in compariſon with men five feet high, is, in the common run, as 512 to 121; ſo that they are not deſigned to carry giants: nor are the fruits of the earth ſufficient to feed them, ſince, in their eyes,

an

an apple would be like a ſtrawberry; and a ſteed would do them no more ſervice than a maſtiff.

Beſides, a giant's bones ought to be doubled in breadth, in proportion to their exceſſive length, in order to preſerve the ſame degree of ſtrength as other leſſer creatures can exert; and, for that purpoſe, his muſcles ſhould, of courſe, be larger and more vigorous. But it appears that, for want of ſuch neceſſary ſtamina, thoſe overgrown beings were debilitated; particularly Macreath, who was bow-legged on that account.

Men under five feet high are of a low ſize. The *Laplanders* are from four to four feet and a half. The *Borandians* are ſtill ſhorter.

It is generally believed, that a diminutive caſt of people, called *Quimos*, inhabit the mountainous parts of *Madagaſcar*; but they are little known, although *Commerſon* ſays that he has ſeen one of their women, about thirty years old, three feet eight inches high.

As the ſtandard has not been fixed with reſpect to the talleſt race, ſo far as to aſcertain where it begins to claim the appellation of giants; we are likewiſe at a loſs how to draw that diſtinguiſhing line which ſhould ſeparate the ſhorteſt claſs of mankind from dwarfs.

Bébé, however, was undoubtedly of this latter deſcription, as he was only two feet nine inches high at his death, in 1764. He died at the age of 23, in the palace

palace of *Staniſlaus*, king of *Poland*, at *Luneville*, where he had ſpent the greateſt part of his life.

This dwarf was born at *Plaiſne*, of hard-working well-ſet parents, who ſaid that he came into the world ſcarcely weighing a pound and a quarter. He was chriſtened on a plate, and had a wooden-ſhoe for his cradle. A goat was his wet-nurſe; becauſe, although his mouth was in juſt proportion to the reſt of his body, it was too ſmall to graſp his mother's breaſt. He had compleated his ſecond year before he could walk in ſhoes an inch and a half long. He was about fifteen inches high at ſix years of age; weighed thirteen pounds, ſeemed hearty, well made, and comely; but his underſtanding did not paſs the bounds of inſtinct.

At fifteen, his height was two feet five inches. While he grew afterwards, during four years, according as he approached manhood, by the ſtrong efforts of Nature to compleat him for the purpoſe of fulfilling the firſt commandment, his faculties were over-ſtrained. Hence proceeded a gradual decay—the ſymptoms of old age appeared—the back-bone gave way—his head bowed down—the feet grew weaker—his ſhoulder-blade jutted out—and his noſe lengthened conſiderably.

Thus poor *Bébé* ſickened, loſt his ſpirits, and expired in his twenty-third year.

In 1751 there was another dwarf, at *Briſtol*, fifteen years old, two feet and a half high, bearing the

the marks of old age, and weighing only thirteen pounds, having fallen away ſix pounds ſince his ſeventh year.

At the ſame time the *Norfolk* Dwarf made his public appearance, two feet five inches high, and twenty-ſeven pounds and a half in weight; while at *Amſterdam* a *Friſelander* was ſhewn of the ſame ſize twenty-ſix years old.

A *Poliſh* gentleman, two feet four inches high, appeared at *Paris* in 1760; two and twenty years old; lively, well ſhaped, and converſant with ſeveral languages: he had an elder brother two feet ten inches high.

Cardan and *Muralt* mention another of two feet. The ſmalleſt kind ſeen was of 21, 18, and even 16 inches. But theſe diminutive creatures, diſperſed in different countries, do not form a peculiar race of men, but untimely and degenerated productions of the human ſpecies.

On the other hand, and in the oppoſite extreme, giants have over-leaped the limits of common growth, from extraordinary powers or caprices of nature.

Laplanders are the ſhorteſt known nation; of four to four feet and a half.

The *Patagonians* are the talleſt, ſince they ſtand at ſix to thirteen feet, according to the voyages of diſcoverers; but, as we have already ſaid, theſe matters require further elucidations.

SECTION III.

On the Difference of Complexion.

THE colour of different people varies from white to black. Between theſe two oppoſite colours there are many ſhades, containing a mixture of livid, or blueiſh, red, and yellow. Theſe varieties are reduced to four principal tinctures, white, yellowiſh, tawny, and black.

White People.

THE *Swedes*, *Danes*, and other northern *Europeans*, are white, except the *Laplanders*, the *Samoyedes*, and the inhabitants of *Petzora*, a province divided by a river of the ſame name running from ſouth to north.

This complexion diſtinguiſhes the *Engliſh*, *French*, *Germans*, *Poles*, and others living down to the 42d degree of northern latitude. According as we advance in ſouthern climates, the tawny teint gradually increaſes.

The *Greeks*, *Neapolitans*, *Corſicans*, *Sardinians*, and *Spaniards*, or thoſe who inhabit the ſouth of *Spain*, are conſequently more tawny than their neighbours.

Aſia

Aſia is the part of the world that contains the greateſt number of whites, in proportion to its population.

From the 65th degree of northern latitude, among the *Tartars*, we find the *Kabarandiſkis* with freſh and reddiſh complexions. The *Circaſſians*, who live on the coaſt of the *Caſpian* Sea, the *Perſians*, *Natolians*, *Armenians*, *Georgians*, *Mingrelians*, and the inhabitants of the northern provinces of the Grand *Mogul*, are generally fair; and ſo are the *Chineſe*, in the inland parts of their extenſive empire.

The ſame colour prevails in the *Aſiatic* iſlands; particularly *Ceylon*, where we may find the faireſt race of ſavages.

There is likewiſe a vein of the ſame blood to be perceived among the *Papous* in New *Guinea*; but in *Africa* it is moſt viſible in the mountainous parts of *Barbary*, in the kingdom of *Morocco*, towards Mount *Atlas*, and along the Mediterranean coaſt, as well as in other inland countries; for, according to *Bruce's* account, the blacks are moſt abundant in ſuch provinces as border upon the Ocean.

As in *America* there is a kind of white *Laplanders*, ſo in *Lapland* we find a mixture of white *Finlanders*.*

We

* By the ſettlement of Europeans in America, and the mixture of all colours in the Creoles and their deſcendants, the former prevail-

We muſt take particular notice of a cream-coloured and inconſiderable ſet of people mingled with the original natives of the Iſthmus of *Panama*. But we have not been able to aſcertain whether they form a peculiar race to be diſtinguiſhed from all others, or are deſcended from yellowiſh anceſtors, like the other *Americans*; or whether the complexion of the living generation be the effect of a caſual temporary circumſtance, or caprice of Nature, rather than the repeated proof of primitive and permanent cauſe.

Yellowiſh People.

We unite under one head two ſhades of colour, a mixture of yellowiſh with a reddiſh likeneſs of copper; and the other is a lighter yellow, bordering more upon braſs. Theſe two colours are always more or leſs mingled with the dark tawny, or ſwarthy tincture of the ſkin.

The red copper-colour is the moſt predominant in the greateſt part of America, even among the Indians who inhabit the ſouthern provinces of that

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ing complexion has inſenſibly changed; but what we have chiefly in view, and the moſt intereſting point, is, to aſcertain the various ſhades of difference incident to the natives of ſeveral countries, according as this gradation is effected comparatively by the change of climates.

continent;

continent; ſuch as the natives of *Guiana*, and others, who live on the banks of the river of the *Amazons*.

The *Brazilians* are darker.

The Iſthmus of *Panama*, and the coaſt of *Peru*, contain the ſhade that is formed between red, copper, and yellow; for there the orange teint breaks out, while the yellow has a caſt of red, or is equally mingled.

Between the Gulph of *Mexico* and the eaſtern coaſt of *Africa*, towards the mouth of the river *Senegal*, are the Iſlands of *Cape-verd*, where we find ſavages called copper-coloured negroes, that are of the ſame complexion as prevails in *Bengal*, and in other parts of *Aſia*. The Iſlanders of *Nicobar* are tawny and yellowiſh. In the *Philippine* iſlands there is an olive caſt viſible; and that yellow teint whitens or darkens gradually, according as the *Aſiatics* are more or leſs expoſed to the burning heat of the ſun.

Swarthy People.

THE nut-brown colour is ſeen in all, even the coldeſt, countries; for it follows the greateſt part of thoſe ſhades which are diſtinguiſhed between freſh and ruddy complexions in temperate climates, and that black hue which prevails in warmer regions.

As the two extremes touch, we need not be ſurprized to hear of exceptions from the general rule formed by the degree of latitude.

We call olive and dark, thoſe teints of a ſwarthy complexion, of which the firſt borders on livid deep green, and the ſecond is blackiſh like ſmoke.

It is, however, difficult to find language to expreſs properly thoſe various nice diſtinctions, which even art can retrace but imperfectly to diſcerning eyes.

If we begin at the frozen points of *Europe*, the *Greenlanders* will be found ſwarthy, or dark.

Like them are their *American* neighbours, the *Eſkimaux*, and other ſavages, from *Canada* to the *Miſſiſſippi*; and even the *Mexicans*, with ſlight ſhades of difference.

In the *Weſt-Indies* the olive complexion marks the few ſurviving original inhabitants, the *Caribbees*, who reſemble thoſe of *Paraguay*, and others along the great Southern Ocean, up the ſtraits of *Magellan*.

But Captain *Cook* deſcribes the people of the *Terra del Fogo* with faces like the ruſt of iron mixed with oil.

The *Laplanders*, the *Samoyedes*, and the *Crim-Tartars*, are the only ſwarthy or tawny *Europeans*.

Like them are the Aſiatic *Samoyedes*, the *Oſtiacks*, and the *Tongos*. The inhabitants of *Grand Tartary* are dark, or of an olive-colour.

In

In the ſouthern provinces of *China* the ſhade of olive deepens, or grows darker; particularly in *Japan*.

The ſubjects of the Grand *Mogul* are generally of the ſame dark complexion, although the Emperor's title ſignifies white. In *Cambaye* they are grayiſh, like cinders. On the coaſt of *Coromandel* a more tawny caſt appears; and on the *Malabar* coaſt a greater mixture of black is obſerved.

The *Perſians* in the northern provinces are pretty fair; but their complexions darken to the ſouthward in the higheſt degree.

To the ſouthward of *Japan* there is a cluſter of iſlands, likewiſe inhabited by darkiſh people; but in *Java* and the *Moluccas* they reſemble a colony ſettled in thoſe parts, called *Malays*, who are of a blackiſh red, or purple colour.

In the iſland of *Formoſa* that darkiſh teint borders on black.

In the iſle of *Ceylon* the blackiſh ſhade is not ſo deep as on the coaſt of *Malabar*. In the *Maldivas* the olive caſt is predominant, blackening to the ſouthward.

Mixtures of all theſe colours characterize Otaheite, and the other new-diſcovered countries, where the immortal *Cook*, La Perouſe, and other mariners of two rival nations, diſplayed their intrepid ſpirit.

That tawny appearance forms a dark and deeper teint along the *Red Sea* and the eaſtern ſhores of *Africa*, among the *Egyptians*, *Ethiopians*, or rather *Abyſſinians*; who have been miſrepreſented as black, becauſe their country was formerly deſcribed as Nubia. Such is the diſtinguiſhing tincture of the ſkin from the plains and coaſt of *Barbary* to *Senegal*; nay, as far as the country inhabited by the *Fouleſe*, whoſe ſkins betray the changing ſhade from deep brown, or dark, to the jetty looks of blackamoors,—who appear in the back-ground of a picture of the human race; where the contraſt of colours is not leſs aſtoniſhing than the infinite variety of mingled ſhades.

Blackamoors.

BLACK is the prevailing colour in the centre of Africa, with gradual ſhades of difference. This jet is darkeſt in *Nigritia*, *Guinea*, and *Congo*, from the ſouthern bank of the *Senegal* to the river *Gambia*, as well as in ſome cities ſituated more to the northward, and in the kingdom of *Tunis*. But in *Guaden*, or *Hoden*, to the ſouthward of the deſert of *Zanbaga*, the black is not ſo deeply ſtamped on the countenance as the dark or ſwarthy complexion.

The negroes of the iſlands of *Cape-verd* and *Goree* are of that poliſhed ſhining black, which may be compared to japan-ware, or fine ivory, or ebony.

From

From the habit of ſeeing and admiring their perſons, they are flattered in the higheſt degree with the idea of being moſt favoured by Nature with that tincture of the ſkin which *Europeans* conſider as frightful and gloomy. Thus familiarized with his beauty, the blackamoor makes a laughing-ſtock of ſuch of his neighbours as are deficient in that perſonal jetty charm which forms his pride. This defect is viſible in *Congo*, *Sierra Leone*, and on the coaſt of *Malaguatta*.

This race of men extends as far as Cape Negro. Their jetty black gives way to the ſooty and ſwarthy air among the *Hottentots*, in *Caffraria*, *Monomotapa*, *Sofala*, *Mozambique*, *Melinda*, *Madagaſcar*, and the neighbouring iſles.

There are, likewiſe, Aſiatic blacks mixed with the inhabitants of countries already mentioned; particularly in the *Philippine* iſlands, the peninſula of *Malacca*, the iſles of *Sumatra* and *Sombreo*, as well as in New *Guinea* and New *Holland*.

After all theſe obſervations, ſeveral ſyſtems have been ſet up, in order to account for, and explain, the cauſes of ſuch a ſkin-deep colour as diſtinguiſhes ſo conſiderable a part of the creation. But, ſince ſome of the opinions ſtarted appear abſurd, a few reflections on this ſubject may prove acceptable.

The ſlimy moiſture in the pores is the principal ſubſtance that contains the tincture of the ſkin in all living creatures, from man to the vegetable.

This

This matter is white and tranſparent in *Europeans*, dark in *Mulattoes*, and black in *Negroes*; and, in them all, viſible on the ſurface of their ſkins. If, by a ſurgical operation, that kind of ſlime be taken out of a Negro's ſkin, the outſide will appear greyiſh from the wound.

Wherever this *mucus* or fluid is preſſed down, it is leaſt blackiſh; as we may obſerve by the palm of a Negro's hand.

The ſame obſervation is applicable to people attacked with the yellow jaundice, as will appear from the reſult of an experiment upon two men dead of that diſorder, whoſe outward ſkin reſumed its former whiteneſs, after having been waſhed to let out the mucous body, that melted in water; becauſe this die is, with reſpect to the ſkin, as ſubſtances repreſented by a looking-glaſs, ſince it throws out a greater or leſſer reflection according to its ſhades of light.

But if, when diſſolved, it be permitted to ſettle, it will become black and ſolid again,—as we have obſerved in the courſe of our experiments; having collected a certain quantity of that matter by means of an ivory blade; yet, being leſs fluid in whites, it is not ſo eaſily found as it is in ſome vegetables.

Such is the paint that Nature uſes to beautify all her works—the ſhells of fiſh, the feathers of birds,

and

and the hides of brutes. It is likewiſe in our power to introduce an artificial colour that the ſkin will imbibe, from injections into the ſeat of the natural teint deſcribed.

ESSAY

ESSAY XI.

On Man: containing the Principles adopted for Studying Phyſiognomy.

THE foregoing deſcription of the human figure leads to the ſtudy of its ſeveral parts.

1ſt. The Head; 2d, the Trunk; and 3d, the Limbs, &c.

1ſt. Man's Head is the moſt noble and eſſential part, as the center of his intellectual faculties. His countenance alone would be expreſſive, together with the fair proportions of his ſkull, even were other parts of his body to be defective or disfigured.

A head that ſtrikes us at once as fitted to the whole perſon, neither too large nor too ſmall, generally beſpeaks a greater degree of ſound underſtanding than we have reaſon to expect from a thick, heavy, and clumſy block. A diminutive ſize is the ſign of weakneſs. It ſhould be neither too much turned round-about, nor lengthened to an extreme.—Symmetry forms perfection; and we may conſider as juſt models, thoſe heads whoſe length, from the occiput to the tip of the noſe, is equal to their horizontal breadth.

The face is divided into three parts.

The

The firſt is from the forehead to the eye-brows, the ſecond is downwards to the noſtrils, and the third reaches to the peak of the chin.

The more theſe diviſions are marked on the countenance, ſo that their ſymmetry is ſtriking, the greater ground appears to expect ſtrong intellects, with a regular diſpoſition or turn of mind.

An eccentric genius is ſeldom ſtamped with the lines that diſtinguiſh thoſe three diviſions; but their equality will be found, more or leſs, upon all faces, when they are meaſured with a ſofter implement than a rule.

The following principles muſt be adopted in ſtudying the Phyſiognomy.

1ſt. The viſage ſhould be compared with the whole body.

2d. The ſtudent is to obſerve whether it is oval, round, or ſquare, or of a mixed form.

3d. He muſt examine it in a perpendicular point of view, according to the three diviſions adopted.

4th. He muſt conſider attentively the character and expreſſion of leading features, ſeen at ſome diſtance.

5th. He is to attend to the ſymmetry and harmony of the whole countenance.

6th. He is to obſerve the deſign, peculiarity, and ſhades of particular *traits*.

7th. He ſhould pay the ſame attention to the three quarters of the outlines upon a ſketch thus ſeparately conſidered.

8th. Nor ought he to be leſs attentive in reviewing and comparing every ſuch part as changes its appearance in a profile taken from a ſide view.

Beſides, if you look at the face length-ways, and then turn it about, ſo as only to ſee the exterior outline of the bones, jutting out at the cheeks and eyes, you will be able to read through a man's ſoul, and diſcover his real character according to the rules of Phyſiognomy.

Whatever originality or extraordinary feature he may poſſeſs, will break out in the ſolid parts and ſtrong lineaments; but the impreſſions of his habits, and acquired talents, will be found ſtamped upon his lips, according as he moves or ſpeaks; for there the image of the mind reflects its agitations, repoſe, and reflections, by indubitable ſigns, keeping pace with every ſituation and ſentiment.

In the next place let us enlarge our picture, and dwell upon the dignity of Man; for, as Buffon, the French Pliny, ſays, "ſur la face auguſte de l'homme eſt imprimé le caractere de ſa dignite."

The Forehead.

THE Forehead is that part of the face which extends from the foremoſt roots of the hair down to the eye-brows, and the root of the noſe.

The regular or irregular form of the brows, their height and compaſs, tally with the turn and meaſure of our faculties, expreſſing our feelings and ways of thinking.

The ſkin, fold, colour, eaſe, and motion of the brow, or temple, contain characters in which the paſſions and affections of the mind are clearly written; for it is the part that the ancients called the gate of the ſoul, the temple of bluſhing modeſty.

Nor does the beauty of it conſiſt in the ſize, and round or ſquare ſhape, ſo much as in the exact proportions with other parts of the viſage; particularly the inexpreſſible majeſty, ſeverity, and grace.

We are ſtruck with admiration by a beautiful object!—the graces captivate us!—That firſt degree of perfection is the *pulcher* of the Romans,—the ſecond is their *formoſus*, or the *pulchritudo cum venuſtate*; or, as Milton has moſt emphatically deſcribed our firſt mother Eve——

> Grace was in all her ſteps, Heav'n in her eye,
> In ev'ry geſture dignity and love.

The Eyebrows.

THE Eyebrows are moving rays, extending croſſways like a bow, more or leſs curved, from the root of the noſe to the outward and foremoſt ſides of the temples:—in concert with the forehead and eye-lids,

eyelids, they contribute to mark the phyſiognomy, by ſerving as a kind of ſhade that heightens the forms and colours of a picture.

The Eyelids.

THE eyelids are two fixed wings, round before, hollow backward, and open acroſs.—The form of the opening correſponds with the jutting orb of the eye, and is joined by two angles. Both lids, particularly the upper lid, are covered with laſhes, of a triangular form; and, by acting in concert, they contribute to give energy to the language of the eyes.

The Eyes.

THE Eyes are almoſt perfect globes, fixed in ſockets before and behind the eye-lids, cloſe to the optic nerve, and holding by ſix muſcles, which direct their motion.—This whole compoſition is of a tender, glaſſy, and ſinewy ſubſtance, containing a humour as brilliant as the fineſt cryſtal.

Eyes are of various colours—blue, yellow, gray, whitiſh, black, and mixed ſhades of theſe deſcriptions. A deep blue, dark, or quite black, gives to the eye that ſparkling luſtre of diamonds, which we cannot ſo well perceive in lighter ſhades of colour. The circular ſpace that encompaſſes the apple, or ball,

is the iris, or bow, conſiſting of ſmall tubes, like rays darting around; and between theſe very ſmall downy ſtrings, through a microſcope, or ſometimes with the naked eye, we may perceive a number of little ſlight and ſoft grains, appearing to crown the whole circle, as it were with a ray of glory, in a manner that diſplays the moſt brilliant colours in man and other animals. In ſome creatures this perfect ſymmetry is ſo ſtriking, as to preſent a ſet of regular figures to the philoſophic eye; nor, indeed, can ſuch a ſight be ſeriouſly contemplated, without thoſe pleaſing ſenſations which attend reſearches into the ſecrets of Nature.

The eye ſhares the motions of the ſoul; expreſſing all its feelings, ſtorms, and agitations, in ſuch true language, as rapidly communicates every impreſſion to the beholder whoſe heart is open to it and ſuſceptible of ſympathy; while thus ſentimental ſpirit, ſound ſenſe, and clear ideas, are conveyed with the force of lightning.

Much as the fire or languor of the eyes contributes to ſtamp the leading features with their diſtinguiſhing perfection, and although they ſtrike us as if they moved in all directions, they have, however, but one circular motion in turning about their center, which they do in ſuch a way, that the pupil appears to go up and down, according as it approaches or removes from the angles.

The Noſe.

LAVATER conſiders the noſe as a kind of pulley-gate to the brain:—this compariſon will, perhaps, appear juſt to men converſant with Gothic architecture.

It is, indeed, the moſt prominent feature; extending from the lower end and middle of the forehead down to the upper part of the upper lip.

We may divide its parts into the root, the ſpine or back, the noſtrils, and tip.

It's roots join the forehead by the union of their reſpective bones with the collateral branches of the upper jaw.

The ſpine is formed by the continued chain of inner bones, and by united griſtles, extending downwards to the peak or point.

The hollow conſiſts of two cartilages joined together; round without, and hollow within, which form the paſſages or noſtrils.

The noſtrils taper more or leſs, and turn round in the hind part, having a ſlight arch, narrower before than backward, and ſeparated by a partition that gives a ſide view of the upper lip.

All theſe parts deſcribed, being covered with ſkin. are imperceptible; except when the noſe is put in motion to contribute, as it does moſt eſſentially. towards the expreſſion of the face.

A hand-

A handſome noſe is never ſeen upon an ugly countenance. Fine eyes frequently accompany deformity; for they are a thouſand to one ſuch a prominent, ſtriking feature, as is ſeldom or never found without a regular ſet of others; for, being conſidered alone, it conveys a high idea of the perſon bleſt with it, according to the following deſcription:——

The noſe ought to be as long as the forehead, with a ſlight hollow* at the root.

On the front-view, the ſpine or foundation ſhould be broad, and run up, in an even line, with both ſides, growing a little larger about the middle.

The tip ought to be neither hard nor plump; with the inner compaſs correctly marked, neither too pointed, nor too wide.

The wings of the noſe ſhould be very viſible when we come to examine it at the lips, ſo that the noſtrils may be ſeen to taper elegantly below.

Taken in profile, the noſe ought to appear only the third part of its length.

The noſtrils ſhould be tapering inſenſibly; arched lightly at the roof; and equally divided by the ſide of the upper lip.

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* Neither the true Grecian noſe, nor the *Apollo di Belvidere's*, has any hollow in the upper-part of it, where it is united and level with the forehead.

The bridge of the noſe ſhould be ſupported by buttreſſes, joining above the arch that borders on the orb; nor ought it to be leſs than half an inch broad.

Although theſe lines of diſtinction conſtitute perfection, it muſt, nevertheleſs, be acknowledged, that many men of merit have been ill-treated by Nature in that reſpect; but we muſt diſtinguiſh their pre-eminence in perſonal merit. For inſtance:—

Lavater ſays, that he knew moſt upright, generous, and intelligent men, ſo unfortunate as to have ſmall carbuncles on the ſides of their noſes, notwithſtanding thoſe qualities which rendered them ſoft, pliable, and paſſive objects; fitted, like wax, to receive delicate impreſſions, rather than to hold the reins of empire.

An aquiline noſe betrays a commanding aſpect, an enterprizing ſpirit, and becoming fortitude.

Straight noſes hit the right medium between the two extremes; and denote men endowed with courage, energy, and reſignation to their fate.

A ſtraight or crooked noſe with a broad bottom denotes ſuperior intellects.

The ſame eminent writer ſays, that this form is uncommon, and never deceived him in his opinion of it.

Small noſtrils indicate timidity and indolence.—But when they are firm and extended, ſuch a de-

Ecary

licacy of ſentiment may be expected, as occaſionally to degenerate into a voluptuous love of pleaſure.

The Cheeks.

THE cheeks are thick and fleſhy parts, fixed on the ſides of the viſage, extending from their lower round border to the outward brim of the under-jaw; and from the ſpherical baſe to the edges of the noſe and lips, which are cloſe to them, and form a part of the countenance.

They follow the motions of the eye-lids, noſe, lips, and lower jaw; and while their aſpect is an index to the ſtate of the body, they are equally affected by diſorders of the mind.—Grief covers them with wrinkles, and they are furrowed over with ſtupidity.

But, on the other hand, wiſdom, experience, and ingenuity, ſtamp all theſe outlines with ſuch a poliſh, as is felt, but cannot be eaſily expreſſed; for a man's character, in a moral, conſtitutional, and intellectual ſenſe, may be aſcertained by the degree of care, brightneſs, and refinement that he has received in all theſe points of view.

Let an experienced phyſiognomiſt examine the bare compaſs of the ſection that reaches from the noſtril to the chin, juſt as it ſtrikes him in two ways, at reſt and in motion; when it is agitated by tears or laughter, grief or mirth; a generous ſympathy,

or an honeſt indignation; and then he will eaſily obſerve how much his features there furniſh a text for intereſting comments; according as the lines are marked with faint darkiſh ſhades, and ſuch delicate touches as expreſs the fineſt ſenſibility, or inſpire the higheſt reverence with the moſt tender affection.

Painters are too careleſs in making theſe particular diſtinctions, to avoid the ſameneſs that marks their maſter-pieces with cold looks, or mere pictures of men, without their characters and leading paſſions.

Dimples* are likewiſe diſtinguiſhing perfections; not peculiar to the fair ſex alone, being occaſioned by the relaxation of two muſcles entwined. It would

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*ON SMILES.

The man who wears no ſmiles upon his face,
Nor bluſhes with the ſpur of conſcious love,
But ſhews a monkey's grin, as knaves will do,
Looks down with frowning brows like Death for prey,
And views with envious eyes another's joys;
Nay, he admits no muſic in his ſoul,
Nor is he mov'd by honeſty of heart
To feel the pleaſures of a ſocial hour,
Or ſplit his ſides with laughter-loving dames,
Who ſpread the graces on their dimply cheeks,
Communicating wit in ſport and glee;

Then

would be needleſs for us to dwell much on what we feel—their grace and beauty, when they proceed from the feelings of noble, tender, and generous hearts.

The Mouth.

THE mouth is an opening acroſs the face, formed by the lips, cheeks, jaws, teeth, and tongue, and extending to the palate, which ſeparates that gap from the hollow inner part.

There lies the breath of life, through the whole range of Creation; and it is the Orator of the heart and mind, that ſpeaks in various characters:—even ſilence is often found more expreſſive than any language.

Indeed, this ſection of the viſage is very different from the general idea attached to the word that deſcribes it; and, if every man was impreſſed with a due ſenſe of its noble purpoſes, he would deliver only divine words from ſuch a ſanctuary as ought to dignify his actions.

Then, quick'ning every ſenſe in dance or ſong,
They mock that miſer's melancholy mood,
Till raptures ſoon intoxicate the brains,
While Reaſon yields her empire for a night,
And ſays (as Shakeſpeare ſaid for John O'Combe)
"Let no ſuch man be truſted."

This organ of ſpeech expreſſes wiſdom and folly; ſtrength and weakneſs; virtue and vice; knowledge and ignorance; love and hatred; ſincerity and deceit; humility and pride; diſſimulation and truth.*

The Lips.

THE lips are two plump and fixed protuberances, ſtretching acroſs, or curving a little like an egg, from the bottom of the noſtrils, the ſides and fore part of the cheeks, to the down upon the chin.

The upper lip is roundiſh, a little arched within, hollow behind, tallying with the globular form of the teeth and gums, which it covers. It is marked with a kind of gutter for humours running from the noſe. The under lip is matched with the other at the orifice, being a larger ſupporter to it; rather round without, hollow within, and having a ſlight baſe for the upper lip.

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* " Bred in Lavater's ſchool," Auguſta cries,
" Which beſt inſpires with love,—the mouth or eyes?"
" Sweet darling of my ſoul!" I thus replied,
With modeſt wiſh her queſtion to decide,
" Let thy fine eyes with kind affection glow—
" On me thoſe ruby lips a kiſs beſtow;
" Claſp'd in thy arms I could determine never;
" But kiſſing all thy face I'd try for ever!

According

According as they are both open, ſhut, gaping, ſtretched out by laughing, or drawn cloſe by ſorrow, reflection, and even whiſtling, we obſerve their effect upon the human figure.

The Teeth and Gums.

NOTHING is more ſtriking than the ſignificant expreſſion of teeth, in ſetting off the viſage in every point of view that exhibits their eaſe and beauty.

They are the hardeſt, whiteſt, and only viſible bones of man; like irregular cones, fixed in ſockets within the jaws, in a row of ſixteen to each jaw. Thus the regular number is generally two-and-thirty. They are of three kinds, matched on each ſide; four upper teeth, two eye-teeth, one on each ſide, and five grinders in each rank.

Every tooth has, out of the ſocket, a kind of viſible parapet or crowned work; and concealed prongs, or a foundation divided by a circular line or bandage.

The fore-teeth are ſharp and roundiſh; larger in the upper jaw than in the lower one.

The fangs, or eye-teeth, are thicker, rounder, larger, longer, and more pointed than the others.

The grinders are almoſt ſquare, ſhort, broad, rough, and pitted like diamonds.—The two firſt are double-pronged; the others have ſeveral points; and the tooth of wiſdom, the laſt cut, at the age of puberty, is

is rounder at the top, but of a leſſer ſize, and not ſo pointed as the others.

Every root of the teeth has a ſmall tube, covered with a membrane, that ſerves as a ſheath to the fibres and nerves.

The tooth is compoſed of two ſubſtances; the inſide a kind of bark, and the outward part, called enamel, reſembles glaſs or china-ware, in ſome degree.

Teeth are faſtened in their ſockets by the band of the gums, which is riveted, as we may ſay, to their borders. Young, hale, and hearty people have elaſtic gums, roſy, and glittering; but age relaxes and gives them a paler colour.

The principal uſe of the teeth is for chewing: the fore-teeth cut and carve; the fangs break, and the grinders bruiſe food as with a mill-ſtone.

They are, likewiſe, not only ornaments, but requiſites for the pronunciation of words, particularly the fore-teeth.

Painters are guilty of a great neglect in omitting ſo eſſential a part in their hiſtorical pieces; for if we conſider it attentively, we ſhall diſcover this branch of the features to be no leſs important than expreſſive, particularly from its cloſe connection with the lips, in repreſenting weakneſs, hypocriſy, and villany.

The Chin.

THE chin is that hillock whoſe motions keep pace with the neck and lips, being fixed to the fore part of the lower jaw, under the lower lip, and projecting before the cheeks.

Long experience has proved to judges of features, that a forward chin denotes a determined character, while a ſmoother one announces imperfections.

Upon this principle we may diſtinguiſh three kinds of chins more or leſs expreſſive.

1ſt. The tapering, or female chin, moſt common to the fair ſex, gives a juſt ground to ſuſpect a weak ſide.

2d. The ſecond claſs runs in a ſtraight line with the under lip, when it is ſeen ſideways. This kind inſpires confidence.

3d. The third, or ſharp-pointed chin, is a ſure ſign of an active and ingenious mind.

The Ears.

THE ears are two protuberances of a ſpongy and griſtly ſubſtance, projecting ſideways, and ſloping from the centre of the head towards the noſe and eyes.

They have ſeveral folds and hollows. The firſt fold, or board, is called *helix;* the ſecond, *anti-helix,*

helix, ſmaller, and more inward; the third, *tragus*, ſtill ſmaller; and the fourth, *anti-tragus*, pretty forward, and a little ſloping within the ſhell. The lower lobe is ſoft, without griſtle, roundiſh, rather oval, and containing ſeveral cavities, particularly the *ſcapha*, the paſſage that communicates with the drum, or tympane.

Although the ear of a man moves leſs than the ſame part in other animals, ſtill it is ſubject to the motions of the ſkull, and other impreſſions communicated by ſound: nor would it, probably, be ſo quiet, were it not for the cuſtom of covering a child's ear from its infancy.

Yet we are perſuaded that this wing of the body, as it admits of no diſguiſe, bears an expreſſive feature, and ſets off the ſymmetry of the whole.

The Trunk.

THE trunk is that ſection of the human body which extends from the lower part of the head to the upper end of the limbs, facing the ſhoulders, and ſloping towards the flank, in the form of a long ſquare, tapering round within ſide, pretty flat behind, and having before two remarkable cavities, one bony and griſtly in its circumference, called the breaſt, and the other almoſt all fleſhy, except about the back, loins, inteſtines, &c.

The neck reaches from the head to the upper parts of the breaſt and back, tapering before, and thicken-

thickening behind, correſponding above, and forward, with the baſe of the lower jaw, and running below upon a line with the ſhoulder-blade, the hinges, and thoſe receſſes where the power of ſneezing is depoſited.

In the hind and upper part it is connected with the temple; behind and below it is blended with the top of the ſpine and ſhoulders, projecting, with varied motions, in the ſhape of what is commonly called Adam's apple, or the larynx. As this projection follows all the ſigns made by the human voice, it claims the particular attention of ſtudents; indeed, although the features of this part (the neck) are very expreſſive, they have been hitherto but little known.

Lavater acknowledges that it was the firſt branch of his favourite ſtudies, and had he not been ſtruck with ſo ſignificant an object of admiration, the world would not have been indebted to him for a line upon Phyſiognomy.

What expreſſion there is in ſtiff or eaſy necks, whoſe varied poſtures ſeem adapted to our faculties! —for the human mind either cringes, advances, or ſhrinks back.

A well-ſhaped neck infallibly denotes a ſteady and reſolute character; but natural wens generally accompany ignorance and ſtupidity, although they proceed partly from the quality of the water, as in Switzerland.

The

The variety of necks is remarkable through the whole range of creation; and among four-footed animals this feature indicates either their force or weakneſs.

The characteriſtic traits of the *trunk* furniſh a matter of contemplation, to which it is difficult to do juſtice; but any novelty found in our obſervations upon it, muſt plead, in ſome meaſure, for a faint deſcription, and ſuch rules as may direct the ſtudy of this eſſential ſcience.

1ſt. In the firſt place, a ſtudent ſhould aſcertain every attitude incident to the trunk.

2d. He ſhould follow, with a curious eye, all thoſe poſtures connected with the motions of the head and four extremities.

3d. Nor ought he leſs anxiouſly to watch thoſe moving ſprings of reſpiration, digeſtion, and other uſes of the belly, from which the viſible ſigns, retraced, of contending paſſions chiefly originate. Every expreſſive ſhade of difference, that is furniſhed by a contraſt of reſt with anxiety, muſt be traced, in ſome degree, ſo far as to form a juſt idea of the part affected, in its bearings relative to others.

The well-known * *Torſo*, in the Vatican at Rome, is a perfect model of a well proportioned figure; back

* The writer of this note has ſome doubts whether this maſterpiece of ancient ſculpure has not been removed to Paris ſince he

back and belly, with every line that retraces, in all points of view, Herculean ſtrength, majeſtic grace, and delicate comelineſs, mingled in a manner that inſpires the admirer of it with a high opinion of Art and Nature at once diſplayed.

It is here that the ſculptor will ſee the marvellous effect of muſcles, tendons, &c. in their elaſtic tone, together with the beautiful outlines that the whole has received from the Creator's hand.

Through the leading features of ſuch a ſtump of man, an intelligent pupil will ſee the violent agitations of the heart, lungs, and midriff, or obſerve the effect of more refined and calmer feelings.—What a field is open for talents to repreſent, in a true light, every intereſting ſituation, with ſuch myſteries as ſurpaſs the general conception of mankind, and bid defiance to the reſearches of vulgar eyes! On this occaſion, it becomes us to contradict an opinion which has too long prevailed,—that the face alone contains expreſſive ſtriking features; for, in the eſtimation of a Phyſiognomiſt, all parts of the body are ſtamped with ſuch marks

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he enjoyed the pleaſure of admiring it in the Clementine Muſeum.

The famous Laocoon, brought to France, will likewiſe ſerve as a text upon which modern ſurgeons may write volumes of commentaries.

as equally denote a man's character, his inclinations, and ſenſations.

The Extremities.

THE extremities are divided into upper and lower, right and left.

The upper extremities comprehend the ſhoulders, arms, and hands. Their length is ſuch as is formed by ſuppoſing them ſtretched out with the palm of the hand turned towards the thigh, ſo far as the fingers reach, or down to the middle of that limb: their bulk ought to be proportioned to the other parts of the body, when it is in good caſe; and the whole contributes equally to ſymmetry, with peculiarities ſtriking us ſo much the more ſenſibly, when we compare the gladiator, the grinder, and the blackſmith, with the idle man in the ſame attitude.

The great difficulty of repreſenting properly theſe extremities proceeds from the different forms of thoſe hafts and hinges by which they are joined together. Hence ariſes a diſproportion of length and bulk between the bones and the fleſhy ſubſtance; as we may diſcover from the ſtudy of this particular ſyſtem.

The hand is that part which conveys the greateſt number of meanings, and performs ſo many taſks aſſigned to it, by collecting in itſelf the whole force of its adjoining parts, more or leſs, according to ſituation;

ſituation; at the ſame time that, ſeparately conſidered, it is perfect in every reſpect proportioned to the reſt, diſtinguiſhed by legible ſigns, and animated by the blood that circulates from the head and heart.

Among a million of hands, which might be compared, not one would match another, taken for a model; nay, were it poſſible to fit a new finger upon a ſiſt that wanted it, however art might imitate nature, the work would be imperfect, and the difference of execution would ſtrike every eye familiarized with their productions; for, with the higheſt invention, a man could only ſpy or borrow beauties from objects that he ſees with a glance, without being able to conceive the grand ſcale and wonderful mould in which they are formed.

Thus the hand makes a ſolemn appeal to our feelings and judgment, with ſo much the more candour, as it acts fairly and above board, being unable to conceal its leaſt motion, even when it is directed by the greateſt villain, or the moſt cunning hypocrite.

Above twenty joints contribute to thoſe movements which expreſs the varied ſenſations of the mind, together with bodily pleaſure or pain, according as it is uſed, either as a neceſſary appendage, or an ornament to the language of the bar, the pulpit, and the ſtage. Nor need we attempt to deſcribe it better than in Montaigne's following

words:——" Quoi des mains? Nous requirons, nous promettons, appellons, congedions, menaçons, prions, fupplions, nions, refufons, interrogeons, admirons, nombrons, confeſſons, repetons, craignons, vergoignons, doutons, inſtruiſons, commandons, inſiſtons, encourageons, jurons, temoignons, accuſons, condamnons, abſolvons, injurions, mepriſons, defions, depitons, flattons, applaudiſſons, beniſſons, humilions, moquons, reconcilions, recommandons, exaltons, feſtoyons, rejouiſſons, complaignons, attriſtons, deconfortons, deſeſperons, étonnons, examinons, taiſons."

Such are the various employments of the hand.

The trunk is ſupported by two lower extremities on the ſides, conſiſting of the Thigh, Knee, Leg, and Foot.

The thigh is longer than the leg, curving a little forward, and rather hollow behind, being about fourteen inches long in a well-ſet man, thicker above, and, within ſide, tapering below. It contributes, with the knee-pan, and the upper part of the leg, to form the knee, a part that is hard to be deſcribed, on account of its form, and ſundry particles.

The leg is fixed between the foot and thigh, in a perpendicular line with the latter, and forming a contraſt to it by the fleſhy parts, or calves, and ancle-bones jutting out.

The

The foot is joined to the leg, being rather round above, and hollow at the ſole, longer before than at the heel: it is higher, broader, and hollower on the inſide, more lengthened at the inſtep, evener and longer at the outer part of the heel.

This limb is the foundation or ſupporter of the human figure; nor will it appear to be leſs ſignificant than the hand, when we take into conſideration its various uſes, in dancing, jumping, walking, running, riding, reſting, &c. by which every excellence is diſcovered: nor can we help preferring feet to hands for ſuperior utility, upon reflecting on the many inſtances of cripples, who, with their ſtumps, have been able to write, knit, play upon muſical inſtruments, and ſtir about, or fill ſome other employment in a ſitting poſture; but the hands would ſerve but as poor ſubſtitutes for ſuch uſeful ſupporters.

Our learned predeceſſor in this ſtudy aſſures us, that he has diſtinguiſhed in theſe two members of the body the ſigns of ſweet temper, pride, and dignity, with other extraordinary qualities; but we ſhall only add, that, beſides their general proportion to other parts, the toes bear a ſtriking likeneſs of the correſponding thumbs.

Upon the Attitude of a Man Standing.

MAN is the only living creature that can ſtand upright with a bold and unchanging countenance.

It is true, that a bear is likewiſe large-footed, and accuſtomed to raiſe himſelf up when he is going to fight; ſo do monkies, in ſome degree, imitate the poſtures of men, as well as that ſpecies of beings the ouran-outangs, who come neareſt to the human ſpecies. But an ape has not ſo broad a foot; nor need we doubt of the ſtanding attitude being peculiar to us, if we reflect that it has been preſerved not only by ſavages, but likewiſe in ſuch perſons as have grown up wild and ignorant among their only companions the beaſts of the field.

Indeed, it is out of the power of a four-footed animal to keep himſelf firm in the ſituation where a rational creature ſtands upon a direct line, paſſing by the centre of gravity between the *os pubis* and the breech, down to the ſquare left between the ſoles of his feet, or ſuch a line muſt fall upon one ſole, in caſe he ſtood upon a ſingle foot.

We likewiſe know, that it would be labour in vain to make a corpſe ſtand erect in that manner, for want of thoſe pullies which ſuſtain the living man, in the direction that he takes to balance his weight, by the command of ſuch muſcles as are pliable and ſubſervient to the main pillars of his frame.

We may ſurely be diſpenſed from giving a full explanation of the admirable machinery that deſineates a falling, riſing, or ſlippery poſture; but let us add, that, as a man's thighs ſtretch out more than

than in other animals, their point, formed by the narrow part that joins the bones, does not exceed an angle of forty-five degrees. Thus the whole body receives a ſufficient prop; for, were not the upper ſtory ſecured, the ſtructure would give way, from its preſſure and natural bias; only one muſcle, however, promotes the forward motion, while ſo many others keep it up.

In ſhort, the head is kept ſteady by the ſpine of the neck, extended by various fibres, whoſe elaſtic force keeps it from reeling in ſleep; while its gentle, forward motion, is favoured by a few inconſiderable ſtrings. The crane, as we may call it, is likewiſe ballaſted, or fortified, in ſuch a way as prevents it from leaning improperly to either ſide.

All theſe, and other parts, move continually while we ſtand; ſo that eaſe is naturally ſought by a change of attitude, and alternately moving on, or ſhifting the foot that bears the burden.

ESSAY XII.

Upon a Man's Walk.

A MAN's natural pace is leſs fatiguing, and eaſier to be deſcribed than a motionleſs halt: ſtanding, he muſt have one foot ſtill and firm, as a ſupporter to the other that the muſcles are to put in motion. They both advance alternately, while the leg riſes, and the thigh is dragged on as if it were by ſliding knots; ſo that the feet are contracted while the knees move forward, and all, in their turns, perform the taſks aſſigned to them, in ſuch exerciſe as varies in ſpeed or agility.

The toes touch the ground, more or leſs, according to the degree of velocity; the trunk bears upon the columns; but they move one after the other, each making room for the muſcles to act their parts; and, in order to relieve them, we naturally lean forward, without conſulting the graces, juſt as mountaineers, particularly on the Alps, are apt to croſs ſummits in a kind of amble, their bodies ſtooping and ſloping, with an apparent degree of eaſe.

On Running and Leaping.

RUNNING differs from walking no leſs in pace than the manner of performing this exerciſe.

The hind part of the foot, according as we raiſe it, is contracted to ſuch a degree as only to touch the ground with the toes, while the ſoles are ſuſpended. For this reaſon, thoſe living creatures who lay down all their feet, are ſlow; ſuch as man, and the bear: thoſe are ſwifter who uſe only their toes; and the ſwifteſt run on tiptoes, as dogs, deer, and horſes do.

At the ſame time that the leg is raiſed by pliable muſcles, the knee advances, and the thigh moves more forcibly; ſo that the alternate angles formed by different joints become more pointed, and the bones, by ſtretching, take a larger compaſs around the baſis and the line that they follow, conſequently with a faſter motion.

The balance is viſibly kept forward, rather in an ungraceful manner, as it would be impoſſible to run quite upright: the arms keep pace with the body, whoſe weight quickens the march, and checks the reſpiration.

A leap exceeds a race in violence, as much as running ſurpaſſes a common pace. It requires no great exertion of the limbs, for the heels riſe; the legs lean forward upon the feet, while

the toes are ſupported and prepared to make a deep impreſſion upon the ground.

The angle, whoſe end is at the heel, becomes more pointed; the knee projects forward conſiderably; the legs bend toward the thighs, which give way at the ſame time that the body falls downwards; and the leaper's perſon appears diminiſhed, till he ſtretches himſelf out by a violent effort that makes his limbs get up behind together with his body. This recoil is favoured by the board or ground on which he falls, as we ſee in tumblers on a ſtage.

Our bodies are capable of greater movements than we generally uſe, and neceſſity diſcovers our powers by ſharpening our appetites and invention. Daily examples prove, that maimed men have learnt to write and perform with their feet the duties of their loſt hands.

In the ſame manner, from habit and practice, they not only balance themſelves upon the ſlighteſt prop, but likewiſe execute ſuch other feats as diſplay their addreſs, and are not unworthy of our meditation.

ESSAY XIII.

On the Five Senſes.

THE organs or inſtruments uſed for communicating the ſenſes are natural machines, ſituated at the end of the nerves adjoining the brain, for the purpoſe of repreſenting diſtant objects.

1ſt. The Eye is a *Camera Obſcura*, or a dark ground, that reflects the image of objects, with their proportions, ſhape, and complexion.

2d. The Ear is a drum, ſtretched upon a ſhell, joined by a ſlight ſtring, and fluttering with the leaſt breath of air.

3d. The Noſe is a very large, moiſt, and twiſted tiſſue, attracting the volatile parts of the air that get into it.

4th. The Tongue is a kind of ſponge, that licks up and imbibes ſuch matter as does not hurt it.

5th. The Touch, or Feeling, is formed by ſoft and ſmall threads, or ruſhes, which receive the impreſſion of other ſubſtances.

Moſt living creatures are ſupplied with theſe organs, but not in the ſame degree of perfection. Had they been more numerous, we ſhould have had ſtronger faculties; juſt as the load-ſtone attracts iron,

iron, and amber betrays the preſence of electric fluid.

Inſects alone have ſail-yards, of which we do not know the uſe any more than they can judge of our ears.

It is by force of light that the eye diſcovers ſurrounding objects; the ear liſtens to them from the impulſe of air; the touch feels them from their ſubſtance and reſiſtance; while the noſe ſmells them by the impreſſion of volatile parts upon nerves connected with it; the tongue taſtes ſoft or ſoluble matters by the ſenſation that they make upon the fibres. *

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* The order and uſes of ten pair of nerves are thus explained by a French Poet:—

Le plaiſir des parfums nous vient de la premiere,
La ſeconde nous fait jouir de la lumiere.
La troiſieme à nos yeux donne le mouvement,
La quatrieme inſtruit des ſecrets d'un amant.
La cinquieme parcourt l'une & l'autre machoire,
La ſixieme depeint le mepris & la gloire.
La ſeptieme connoit les ſons & les accords;
La huitieme au dedans fait jouer cent reſſorts.
La neuvieme au diſcours tient nôtre langue prête;
Et la dixieme enfin meut le col & la tête.

For the benefit of thoſe who underſtand only the Engliſh language, we attempt an imitation or paraphraſe of the foregoing verſes on the ſubject diſcuſſed.

On viewing Nature's noble plan of things,
We find Five Senſes mov'd by double ſtrings;
While every fibre aids the lively ſenſe,
Ordain'd by wiſeſt laws of Providence.
The firſt, in rank, directs our fragrant ſmell;
The ſecond gives us power of ſeeing well;
The third commands the motions of our ſight,
To contemplate with eaſe the ſacred light;
The fourth to ſecret lovers gives the law;
The fifth keeps time in moving either jaw;
The ſixth, by turns, pourtrays our pride or ſlight;
The ſeventh aſſerts to melody a right:
To wake the ſoul with feelings fit for kings,
The eighth ſtrong nerve employs a hundred ſprings;
The ninth excites the call for daily bread;
The tenth ſuſtains, with grace, the neck and head;
For Adam's children, upſtarts, lords, and kings,
Are tun'd, like harpſichords, with tender ſtrings.
Thus muſic, poetry, and art combine,
With equal harmony, to draw the line:
As Handel's notes ſtill charm the Britiſh ear,
So Garrick's language us'd to draw the tear;
Inſpir'd by Shakeſpeare and the tragic Muſe,—
For who could tears at their command refuſe?

ESSAY

ESSAY XIV.

On Changes produced by the leading Paſſions, as they are impreſſed on the human Countenance; and the whole Appearance of the Body, with reſpect to Painting.

LE BRUN's ſketches contain the principal ſigns by which the paſſions manifeſt themſelves, as tranſports of the ſoul, by ſuch impreſſions on our ſenſes as are repreſented by motions of the body. Thus whatever paſſes at the ſeat of life is diſcovered without diſguiſe, for every paſſion has a peculiar language and character.

No ſtriking alteration of the muſcles proceeds from ſlight ſenſations, ſuch as ſurpriſe, admiration, eſteem, veneration, &c.; but, although the whole frame ſeems to be at reſt while it keeps pace with peace of mind under theſe circumſtances, they ſtamp upon the features a particular caſt, viſible to diſcerning eyes. For inſtance; aſtoniſhment is expreſſed by a backward motion of the head, ſtaring eyes, riſing brows, ſhrivelled forehead, and an open mouth.

But when we admire, our looks recover more of their natural air; we gape leſs, and gaze quietly, without over-ſtraining a feature.

We

We find reſpectful ſentiments conveyed with a natural poſture, attention, and a ſlight ſtoop; while even the eye-brows ſlope towards the noſe, and curve a little about the temples.

Grief has its particular expreſſions; a languiſhing air, a heavy countenance, a relaxation of all the muſcles; the head careleſsly leaning upon either ſhoulder, prickly eye-brows, half-ſunk eyes of a pale yellowiſh colour; the corners of the lips pointing downwards, and ſhewing what we juſtly call a chap-fallen wretch.

Other emotions depend on mental or conſtitutional weakneſs, with ſhades of difference between them, and greater agitations in their gradations from timidity to fright; while the ſoul ſhrinks with ſhame upon itſelf, as we may ſay, and, from a ſtate of dejection, falls into the loweſt degree of miſery, —inſanity. Theſe varying ſituations have equally their ſymptoms marked upon the countenance.

When we are frightened, while our eye-brows ſtand on ends, with their muſcles contracted; the forehead is wrinkled; the eye-lids open, and try to conceal themſelves under the eye-brows, in ſuch a manner as to diſcover almoſt all the white of the eye above the pupil, which falls and hides itſelf behind the lower lid: the mouth gapes, the lips ſtretch out, diſcovering the teeth and gums, with all the veins of the diſcoloured and diſfigured face; for even the hair then briſtles and ſtands on ends.

Pleaſant feelings are marked by infinite ways, geſtures, dancing, &c. Immoderate fits of laughter produce diſtortions worthy of notice; for when we are ready to ſplit our ſides, the veins of the neck and face ſwell; the muſcles are puffed up; the eyebrows riſe from the middle of the upper lid, and fall downwards about the noſe; the eyes are almoſt ſhut; the mouth, half open, diſcovers the teeth; the corners of the lips ſtretch upwards; the cheeks are ſtrained, and the eyes appear to diſſolve in tears; the blood flies up into the face, and while the head is kept backward, the whole body bends a little forward, and the arms, extended, fall upon the flank.

It follows, of courſe, that when a young painter is to repreſent rage and deſpair, he muſt not forget any attitude that accompanies a wild and frantic look,—the body forward, the upright threatening head, the hands clenched, unleſs they are armed; a wrinkled forehead, ſelf-biting lips, with their corners half open, to expreſs the grinning, bitter, cruel, and diſdainful ſcoff. During ſuch a ſtorm as he would ſtrive to retrace, the living object alternately changes colour, the upper veins are puffed up, and, as we have before obſerved, he appears pale as a ghoſt, and partly raving like a lunatic. Theſe are the ſad extremes, againſt which Reaſon does not always ſufficiently guard the beſt of men.

ESSAY

ESSAY XV.

Anatomical Explanations of Changes produced by the Paſſions upon the Human Figure.

WE come now to explain the cauſes of thoſe ſingular, various, and aſtoniſhing effects, which are produced by motion and ſentiments upon the human figure, particularly the countenance. In this purſuit we muſt conſider the ſubject under the following heads, viz.—

1ſt. The conſiderable number of parts covered by the face.

2d. Their different directions, ſtrings, and bands.

3d. Their peculiar movements.

4th. The power of the reflector, or glaſs, that repreſents to our ſight the ſtate of the body and mind.

5th. The effect of ſickneſs upon the viſage, and how the paſſions are there impreſſed, without our knowledge and conſent.

6th. The degree of force with which the blood flows through the ſmalleſt tubes.

7th. The vital ſpirit poured by the nerves.

8th. The harmony and diſorder of ſuch parts of the viſage as are a fixed object of meditation to the thinking man.

As

As all theſe viſible alterations can be proved from the animal ſyſtem in living creatures, we proceed to mention the principal inſtruments employed in it.

If, for a moment, with the mind's eye, we trace the roof and ceiling of that ſtupendous piece of architecture, the head, we ſhall find it moſt regularly deſigned and executed, with a ſolid, well-ſupported partition-wall, or floor, upon which all the moveable parts of the face are fixed: we then diſcover in this curious work different avenues, which Nature has wiſely left as channels of communication between the inner centre, or vital parts, and the viſible front. Beſide this wonderful contrivance, a great number of muſcles are fixed to the bony, or crown-work, with their moveable points ſloping towards the outward ſkin or ſurface of the whole. Hence ariſes a ſudden change upon the face, from varied motions of the eyes, brows, and every other part that is continually touched by thoſe tender ſtrings which communicate in ſo many ways with the ſoft parts ſuſceptible of impreſſions.

Independently of theſe muſcular agents, is an incredible quantity of nerves, connected with the brain and the organs of the five ſenſes already deſcribed: theſe have their intricate windings and turnings; being interſected, and advancing forward, they contribute to the texture of the ſkin. The veins and arteries have the ſame circuitous route. All theſe parts are fixed together upon a ſubſtan-

ſubſtantial layer; and as all the chinks between them are filled up by the general conſequence of good living, a comely appearance is preſerved in addition to a blooming complexion.

It is likewiſe eaſy to obſerve, that the veil, thus formed to cover the viſage, is thinner in ſome parts than in others; being very fine upon the eye-brows, within the noſe, and on the lips; but thicker on the forehead, cheeks, and chin.

In ſupport of theſe obſervations, let us give ſome examples to illuſtrate the theory.

A face painted with joy appears ſerene, with all the adjoining parts unruffled; for the nervous power is there neither too ſlow, nor too quick: but a ſorrowful countenance is diſfigured with wrinkles or plaits, formed by the ſhrinking muſcles, from the brows to the lips. This effect appears to proceed from the diſorder of the nerves, affected by the irritation of the mind.

A profound melancholy is marked in ſtronger characters. The nervous ſyſtem being deranged, thoſe finer ſtrings, the muſcles, are more contracted:—the eye-lids ſcarcely perform their duty; or, if they open half way, it is only to let out, through their ſluices, a flood of tears. The muſcles of the noſe and mouth ſhrink with violence—the eye-brows are knitted—twitchings follow, and bring on a temporary interruption of breath, from the ruffling of the nerves communicating with the mid-

riff and the ſeat of the lungs; where, the air being let out by their friction and convulſion, that difficulty of breathing is attended with ſymptoms familiar to every obſerver, who finds the whole frame ſhaken and ſinking under its own weight for want of thoſe elaſtic ſprings which promote the circulation of the blood. Hence proceeds a ſwoon, marked by the colour of death; and occaſionally relieved by ſuch a quick perſpiration, as extracts a moiſture that may be called, under thoſe circumſtances, the tears or exhalations of the whole body.

All the muſcles are expoſed to a ſtill greater diſorder by a violent agitation of the nerves, when it is cauſed by a fit of paſſion.—The viſage is inflamed—the eyes ſparkle—the fleſhy fibres ſhrink at the mouth, noſe, forehead, eye-brows, and eyelids;—the lower jaw ſtarts up, while the lips alternately join and ſtretch, diſcovering the foaming tongue and teeth. Nor is the internal ſtorm leſs boiſterous, from the increaſe of vital fluid by the nervous conductors, which are ſhot upwards by the ſtrongeſt and moſt tender ſtrings of a feeling mind.

What ſtrikes us as deſerving the higheſt admiration, is, the over-ruling command of the countenance which thoſe nerves poſſeſs, from their twiſted form, to ſuch a degree of ſwiftneſs and fidelity, as to betray the ſecrets of our hearts, and prove diſſimulation even in the greateſt hypocrite.

Since an uncommon flush and sudden paleness are infallible signs of opposite agitations, Nature has wisely contrived to confine the tubes and veins of the face within a considerable number of chains, for the purpose of fixing instantly upon the physiognomy a stamp of the passions in characters, making a deeper impression with the hand of Time; so that the principle of life (the blood) having tinged the surface, according to our varying affections and habits, their marks are never effaced; nor is it then difficult for a judge of features to read at once the lines in old men, so as to know their professions and dispositions.

The complexion is likewise affected by less lively sensations, as when we blush from shame without our will, in a manner that must be accounted for by considering the spot that discovers the internal secret agitation producing such a change.

The veins and arteries of the cheeks are connected with others in a chain of circulation, supported by the upper and lower nerves, which act and react upon the whole mass of blood; returning quickly through those channels, after having been kept back with the pressure accompanying the sentiment marked by blushes; thus proceeding from every nerve that agitates our senses, more or less, according to circumstances and situations.

Besides, in the muscular fibres of the arteries, there is a moving power—a centre, from which

ſpring out the ſlender nervous ſtrings varying in proportion to the ſenſations produced in the mind; but, although their ſtrength is not exerted on all occaſions, they act in concert with every nerve irritated, as in a general convulſion, ariſing from a diſorder of the whole ſyſtem, when the circulating fluid ceaſes to flow in ſome particular parts.

It is not, however, from ſickneſs alone that paleneſs originates; for it equally attends ſuch fits of paſſion as convulſe the frame; but moderate anger makes a different impreſſion, by animating the countenance like a flow of ſpirits.

The chain of connection kept up by the nerves is very differently diſplayed in fear, terror, melancholy, and ſuch other impreſſions as are made by an indifference or averſion to particular objects. The ſudden change of colour then continues, more or leſs, according to the force of ſuch ſenſations.

An entire relaxation of the nerves has another effect upon the tubes and conductors which diſtribute the vital principle:—the muſcular fibres loſe their elaſtic power; and as all the organs of ſenſation abound in the arteries of the face more than in any other part, their inactivity ſtops the red fluid from riſing there, and thus occaſions the pale colour that indicates the want of animation, in every ſenſe of the word; for the body correſponds exactly with the mind in repreſenting and ſharing all their feelings.

This

This correſpondence is maintained by various imperceptible ſprings of action, by which thoſe inſtruments of ſenſation (the nerves) are moved in perfect harmony wherever they are moſt ſuſceptible of impreſſions; particularly on tender parts; conſiſting, like the lips, of a kind of gauze, or a thin veil, for bluſhing beauty. We need not, therefore, be at a loſs to account for the inexpreſſible raptures communicated through every vein by an Engliſh* buſs† from the fair object of our love; for, like lightning, it pierces the ſoul, and makes the heart leap with exquiſite joys of ſenſibility!

Let us now trace, with the eyes of anatomiſts, the wonderful effect of thoſe delicious impreſſions made by kiſſes.—The delicate texture of the lips is interwoven with a ſtill finer tiſſue than any other in the tender part formed by branches of the fifth pair of nerves, connected with others placed in the deepeſt receſſes of the brain, and ſurface of the head,—the whole being united with thoſe muſcles of the

* It is neceſſary to make a diſtinction between a French and an Engliſh kiſs, in order to clear up the point of argument beyond diſpute; for as, in France, a modeſt lady would only permit her cheeks to be touched by a lover, the ſenſation would not be ſo lively there as in England, where no idea of indelicacy prevents any fair maid from proving the juſtice of aſſertions applicable only to ſalutes of a different nature.

† Un Baiſer à L'Anglois.

neck which are entwined with the moſt refined feelings. The nerve that promotes ſuch a pleaſing ſenſe as thrills through every vein has the ſtrongeſt elaſtic ſprings, acting in concert with the eighth claſs, that penetrates the boſom, and affects the heart; while others, at the ribs and lower parts, move in perfect harmony with them in their reciprocal impulſe and re-action upon the human frame.

After having thus explained the ſeries of nervous conductors, we may conceive how that electric ſtroke is felt and communicated in ſuch a manner, as no language can expreſs in terms ſuited to our ideas.

In another point of view, thoſe ſeats of pleaſure, which cannot be ſo well deſcribed as we could wiſh, we mean the lips, equally diſcover the foreſight of Nature in providing for our daily wants, by fixing there the taſte that judges the quality of food and beverage intended to prolong or comfort life.

From a chain of circumſtances partly related, might we not infer, with a degree of reaſon, that all the impreſſions on our bodies are at firſt merely local, or confined to a particular ſpot, where, according as they are received by the organs of ſenſe, a nervous ruling power communicates them by ſubordinate ramifications iſſuing from the centre, like ſo many different ſtreams which branch out from the ſame ſpring, with a continued mutual intercourſe to keep up an equal flood, except when their

their channels are injured by ſtorms or inundations: juſt ſo the human conſtitution is agitated by paſſion, the affections of the ſoul, and diſorders of the body.

Let us, then, conclude, that, from the cradle to the grave, the happineſs of our lives depends, in great meaſure, on a well-modelled nervous ſyſtem, —ſuch as gives a quick reliſh to all the endearments of love and friendſhip. But ſurely we do not profane theſe words by applying them to thoſe pure, diſintereſted ſentiments, which produce the generous ſacrifice of every perſonal concern to the objects of our affection.

In whatever light we contemplate the form and organization of man, he appears deſigned to be lord of the whole creation. What a glorious work it was for the Supreme Deſigner to animate a maſs of clay in ſuch a wonderful way, as to ſtamp upon it thought, feeling, and moral character!

What mortal hand will draw juſt outlines of the inner fortifications ſurrounding his head and crown!

Can a living creature, a pillar of fleſh and blood, attain to ſuch a degree of intellectual powers as alternately reſt and ferment? His head is covered by the Divinity with comely locks, appearing as if they were the trees of a ſacred foreſt ſhading a ſanctuary. Thus we ought to be ſtruck with reverential awe on viewing an object that a glaſs or a warm imagination can eaſily magnify into a moun-

tain, flaſhed with lightning ſufficient to embelliſh, ravage, or deſtroy a world!

And in ſuch a point of view, how expreſſive is that grove which crowns the brow of a hill devoted to meditation!

The neck, without expreſſing a man's thoughts, indicates what he is going to ſay, with the freedom, eaſe, and dignity becoming his rank on earth; for it is a ſtrong pillar, that may be conſidered as an emblem of power and dominion.

Whenever this part has its defects, it is a ſign of weakneſs.

The human countenance is an image of the Deity, containing the reflection of his ſoul.

His forehead is a table of braſs, on which various ſentiments are engraven in indelible characters; that is, the ſeat of joy and melancholy, wiſdom and ignorance, honour and ſhame, honeſty and deceit.

His brows are covered with an arch like a rainbow,—the ſignal of peace when it is at reſt; but its diſorder denotes agitations of the mind. This feature has a peculiar grace when the circle is regularly drawn.

The noſe is a land-mark, like a mountain that ſeparates two vallies.

The eyes appear to be of glaſs, conſequently windows for the ſoul; tranſparent globes, ſources of light and life: their ſhape deſerves particular attention in forming an idea or likeneſs of a perſon, from

from the ſtate and ſituation of the ſockets. Nor ought we to take leſs notice of thoſe parts which connect the eye-brows with the noſe, where the ſtamp of the human will, and the ſigns of active life, are moſt conſpicuous.

The noble, deep, and hidden ſenſe of hearing is placed on the ſides; and, as a man ought to hear around for himſelf alone, his ear is plain, without ornaments, or beautified only by its depth, poliſh, and delicacy.

Upon a part of the face there is a kind of cloud, that marks ravenous appetite, and an exceſſive love of pleaſure. The upper lip expreſſes ſtrongly ſuch leading foibles; for a rakiſh life weakens it, pride and paſſion bend it, cunning ſharpens it, kindneſs rounds it, love and enjoyments give it an inexpreſſible charm.

A fine row of teeth is likewiſe a deſirable perfection. A pure mouth is, in every ſenſe, a recommendation of the whole perſon; and like a beautiful porch-door that correſponds with a palace for the voice, which we may call the orator of the heart and ſoul, ſince it communicates the language of the moſt tender ſentiments.

The under lip begins to form the chin, and the jaw-bone compleats the ellipſis or oval form of the viſage, as a key-ſtone of the vault in the noble ſtructure delineated. This part, according to Grecian models, ought to taper inſenſibly.

But

But as deſcriptions of this kind ſeldom afford novelty ſufficiently agreeable to the bulk of plain folks, however diſpoſed they may be to reflect upon their journey through life, if we cannot ſtrew over with flowers the little way that the gentle reader has to paſs with us, let him ſmile, at leaſt, on our endeavours to keep up a flow of ſpirits, by deſcribing in poetry that enlivening effect of electricity,—the ſtrong ſenſation which forms the chief ſubject of this Eſſay. Nor need we rove in fancy to France or Italy in ſearch of as lively a ſcene as ever Titian drew.

ON INNOCENT KISSES.

In merry days of youth my heart would yield
To Beauty, when Diana took the field;
In rural innocence to run a race,
Or ſhare the toils and pleaſures of the chace
With growing Nymphs, from whom I choſe the beſt,
Like Venus, ſmiling in the ſtream undreſt;
For after hunting it was then the mode
For girls and boys to bathe beſide the road.
There my delight was, playing on the flute,
Far from thoſe ſcenes where Bacchus grows a brute;
Proud as my loyal friend of Orange-grove,
I thought no treaſure equal to my love:
Fearful I gaz'd, in ſilence, like a fool
Who ſaw the Dee embracing Bala Pool;
But, born a bard, whoſe ſoul enjoy'd the ſight,
I ſpoke for favour thus, with hopes, till night:——
Bathe on, my Pamela, the clock ſtrikes five,
To quickeſt ſenſe of feeling be alive;

Conceal

Conceal thy beauties in the grateful flood,
Enough thofe ruby lips inflame my blood.
Bleft with thy fmiles, admiring every grace,
A painter longs to draw thy blooming face;
Thy freth complexion, dimples, and the rofe
That gives electric kiffes, while he glows
With zeal to paint, as Adam painted Eve,
When Parfon Poole fhall blefs and give us leave;
For, faid a Monarch of immortal name,
One Kifs is worth a thoufand years in fame!

ESSAY

ESSAY XVI.

Upon Phyſiognomy, and the Study of Features, with Rules, &c.

BEFORE we lay down the principles of this ſcience, it becomes us to draw a line of diſtinction between differences in particular limbs and features, and that general uniformity which is viſible through the whole creation.

Nature not only draws, but executes, all her deſigns upon an univerſal ſcale, where every ray of glory is pointed towards a common center. The heart beats with the ſame ſpark of life that moves the finger; the ſame Divine Power modelled the ſkull and the nails. Art differs by only matching pieces of works deſigned by human genius.

But in the great and marvellous mould every creature ſeems to have been caſt at once: all the parts are compact; the ſtock riſes into a ſtalk that produces branches bearing fruit and flowers, the whole being united, down to the roots of the tree.

Yet, notwithſtanding their cloſe union, the production of one branch, A, cannot be ſaid to grow upon another, B; much leſs does it belong to a

different vegetable, for it contains only the quality originally aſſigned.

Thus one man's finger would not ſuit another's hand, for every particle in his frame is exactly matched to the whole; nor does the blood at his toes differ from the fluid that animates his boſom: the nerves and bones are equally proportioned to fit only an individual ſeparately conſidered; ſo that, from a limb or joint, we may aſcertain the juſt meaſure of other principal parts. If his head be oval, the whole takes the ſame form; if it be round or ſquare, the reſt partakes of ſuch a diſtinguiſhing, but uniform, appearance in root and branch; nor can the ſmalleſt particles be taken away, or added, without deranging the regular ſyſtem. This ſymmetry is peculiar to every rational creature in his ſtructure, complexion, hair, veins, voice, gait, manners, and paſſions; but with theſe peculiarities he has full ſcope for his mental powers and feelings, without being able to overleap the bounds aſſigned by Providence.

It muſt, however, be granted, notwithſtanding the permanent general ſameneſs, that every countenance is conſtantly ſubject to ſuch changes as are merely perſonal in a particular character; but ſtill a man can only change himſelf, or a motion, in a ſtyle that is all his own; for affectation or imitation may be diſtinguiſhed from originality.

Lavater

Lavater ſays, that he bluſhes for the age he lives in; being under the neceſſity of diſcuſſing matters ſo ſelf-evident as to flaſh conviction when they come to be viewed with the clear light of Reaſon, although they have been ſtrangely argued by pretended philoſophers.

Nature forms all creatures perfect, in a mould where nothing ſeems to have been caſt in ſeparate pieces, to be gradually matched with each other, as a mortal ſculptor would do before he could imitate, in any degree, the beſt models. This truth is then viſible all over the univerſe, from man down to the loweſt plant; nor ſhould we compare with either the moſt beautiful Moſaic work, without feeling how ineffectual our efforts would be to copy ſuch an original.

As an introduction to the knowledge of features, it is indiſpenſable to ſtudy the order and harmony of the viſage in all its component parts, ſo far as to comprehend and ſee, at one view, all the diſtinguiſhing natural lines which differ from the effect of art, reſtraint, or diſſimulation; nor muſt a ſtudent deſpair of making a ſucceſsful progreſs, whenever he can diſcern every kind of ſuch original diſtinctions as form a ſtriking contraſt with ſuperficial appearances, acquired by thinking, habit, and education; for, whatever poliſh may be derived from theſe circumſtances, a man's ſoul is to be ſeen through the natural veil (the body), independent of ſuch gradual

gradual or caſual alterations as were not formed by the great Creative hand.

By continually comparing notes within ourſelves, or reaping the fruit of daily experience in the circle of our friends, and looking, with penetrating eyes, at their lineaments, not only as impreſſed with paſt lives, but according as we have known them, without diſguiſe, from an early period, we may be able to aſcertain the diſtinction betwixt the natural ſtamp and their acquired air. It is then only that we ſhall be qualified to judge how much thoſe outward ſigns correſpond with the moſt ſecret inclinations, ſince every deviation from the paths of Virtue will leave a track behind. A courſe of exceſſes or iniquity diſfigures a man, and degrades him in his own eſtimation, as well as in the world's eye, which he conſtantly avoids; for, being grow nugly, or ſcarcely known to his neighbours, he dares not look them full in the face.

Such ſtudies as theſe ſhould be accompanied with varied obſervations and continual demonſtrations in all the walks of life, in ſcenes of buſineſs and pleaſure, as well as in the haunts of indolence and diſſipation.

Thus piercing eyes would become familiarized with what might be called merely contracted or profeſſional looks, while the judgment was exerciſed in forming a ſtandard of opinions, upon examples correſpond-

correſponding with precepts and the fruits of reflection.

In no profeſſion could an error be ſo fatal, as in pronouncing raſhly upon a man's character and good name from his leading features, according as they ſtrike a ſtranger, who had no better criterion for his determination of this point. A falſe principle in our reſearches might, therefore, be productive of bad conſequences to ſociety.

A few ſafe rules may, however, be drawn from long contemplation, conſiſtent with a train of thoughts, partly ſuggeſted by *Lavater*.

On this occaſion we addreſs, particularly, the riſing generation, under an idea that youth muſt feel it a delightful taſk to trace the marks of ideas, according as they ſhoot, with the different degrees of ſympathy and antipathy felt even by children at an early age. Such feelings for and againſt ſtrangers, at firſt ſight, muſt not, however, be confounded with impreſſions of beauty or deformity, and notions conceived from a previous acquaintance, affection, or prejudice.

Nor are our wiſhes for ſucceſs at any game between two unknown players determined by conſiderations of rank and fortune when we have no intereſt at ſtake, eſpecially if both their perſons appear equally amiable; but their ſouls are not ſo to the mind's eye, and that inward monitor which directs our caprice and fellow-feelings.

Indeed,

Indeed, the ſtudy of human features is what we all apply to, more or leſs, without forming a regular ſyſtem from our obſervations, for the purpoſe of accompliſhing the grand object in view, which is to trace effects to their cauſes by the lines and movements of the face, ſo far as to know and diſtinguiſh the different qualities of the heart and mind, together with their true reſpective ſigns, as applicable to all caſes and ſituations: in ſhort, it is learning to read the moſt eſſential pages in the great book and language of Nature.

In this career a pupil ſhould act like a prudent architect, who draws the plan of an edifice, and makes an eſtimate of the expences, before he begins to execute it, without knowing whether the means correſpond with his deſign. In like manner *Lavater*'s diſciples, and our's, ought to feel their own zeal, faith, and faculties, equal to the objects which we wiſh them to attain from the following leſſons on this important ſubject.

1ſt. In the firſt place we muſt examine carefully every ſubſtance inherent in the human ſpecies, and what diſtinguiſhes our fleſh and blood from brutes and the vegetable creation, in order to feel an adequate idea of our own importance in the ſcale of beings.

2dly. We muſt afterwards take not only each limb and feature, but their harmony connected with the whole, as objects to be ſeparately ſtudied; nor

ſhould our knowledge of proportions be acquired only from books, but practice; in meaſuring them under the eyes of able maſters, who will point out the cauſe of ſo many imperfect deſigns, and conſequently falſe eſtimates of Nature's works, founded on an old-ſtanding neglect of diſcriminating between ſtraight and crooked lines.

When all parts of the viſage and body are harmonized with perpendicular lines, not only beauty, but even ſound ſenſe, a dignified character, and other qualities, are generally found to correſpond with this ſymmetry, or any other that may be obſerved in an oppoſite direction.

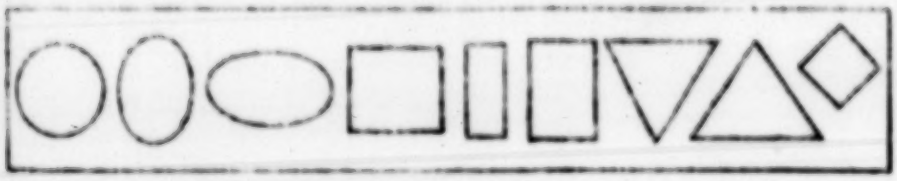
3dly. The particular ſigns and characters ſtamped upon the face are to be no leſs attentively conſidered.

In drawing faces, a Painter and Phyſiognomiſt ſhould begin with ſuch as have ſtriking traits, peculiar to judges or philoſophers, as well as to idiots and men of feeling, or others of a quite different deſcription.

Such a character muſt be thoroughly ſtudied in all points of view, juſt as if we were to draw his picture from the life, to be conſtantly compared with the living original. Not only the nature, but every part of ſuch a perſon, muſt be well examined, juſt as if the meaſure of the whole proportions were to be taken by perpendicular and horizontal lines,

ſo far as to determine the relative ſymmetry of his leading features;—the forehead, noſe, mouth, chin, and particularly the form, colour, ſize, depth, and turn of his eyes.

In examining a viſage in a forward view, the firſt conſideration is, whether it be round, oval, ſquare, triangular, or reſembling, more or leſs, one of the following forms of moſt, if not all, human faces, viz.—



In the next place, we muſt compare a profile of the ſame face with half of either of theſe models, before aſcertaining the perpendicular length of the three ordinary ſections,—the forehead, noſe, and chin, upwards and downwards, with their reſpective bearings, or ſymmetrical proportions.

This operation is eaſily performed by an ideal line drawn from the deepeſt point or root of the noſe down to the tip of the upper lip; by which means their proportions are diſcovered in three ways,—for their perpendicular form up and down, their ſuperficial, and inward direction, above and below.

This appears to be the only method of fixing a fundamental principle for acquiring the theory and improving the practice of phyſiology, according to the rules adopted by the beſt painters in their profeſſion. After a juſt impreſſion of theſe traits, the forehead, the eye-brows, the noſe, and intervening ſpace, ought to attract equally the ſtudent's attention; particularly that ſtriking angle which is formed by the tip of the noſe and upper lip, either ſtraight, flat, or pointed, with ſuch a difference in the length on the ſides as will not eſcape his notice.

Seen ſideways, the mouth ſtrikes us only in three principal forms; either the upper lip paſſes over the under one, or the latter pouts up, or both when cloſed are equal on a parallel line.

A right deſcription of the chin admits of the ſame diſtinctions; it is either perpendicular, a peak, or ſloping inwards: the bottom will form an horizontal line more or leſs ſtraight. The bent in the jaw-bone deſerves the cloſeſt obſervation, as it indicates different qualities of the mind.

On this occaſion the great Profeſſor *Lavater* ſays, that oſteology, or the ſyſtem of the bones, were it properly ſtudied, would produce ſuch diſcoveries as he points out, by aſſerting that an able blind-folded Phyſiognomiſt might find out, in great meaſure, a character that had bid defiance to all

reſearches,

reſearches, merely by handling properly his jaw-bone.

Certain it is, however, that this ſingle part, well ſtudied in profile, has ſerved as a clue for unfolding extraordinary faculties in ſome individuals, whoſe other features were not ſufficiently expreſſive, nor proportioned to their mental power. Painters and deſigners cannot, therefore, take too much pains in repreſenting this ſingular feature in the moſt prominent light of which it is ſuſceptible. Thus they will do credit to the uſeful arts that they profeſs, in copying Nature, and reviving the objects of our love, reſpect, and veneration.

In regard to the eye, we muſt firſt meaſure its diſtance from the radical part of the noſe, and then examine its ſize and colour, together with the outlines and compaſs of the eye-lids. Thus a countenance becomes an object of ſtudy, juſt as if every line in it were but a part of a poem to be learned by heart.

In like manner, a poet would caſt a glance over a favourite compoſition, run over the chief diviſions, and impreſs on his memory the arrangement of the whole, ſo as ſoon to be able to repeat every verſe, by conſulting occaſionally the book that he admired.

When this fundamental Phyſiognomical knowledge is acquired, by ſtudying the face of an eccentric genius, a ſtrong reſemblance of it ſhould be

looked for in all the pupil's walks, until he found one that correſponded exactly with the living object of his ſtudies.

This likeneſs will be ſeen beſt in the foreheads; for if they are alike there, the other parts will doubtleſs prove their uniform affinity.

The great ſecret of a Phyſiognomiſt is, to abſtract and view ſeparately thoſe leading features of which he ſhould watch every motion and direction, as if each were placed by itſelf, unconnected with others.

Upon finding out a perfect walking copy of the original ſtudied, the ſame courſe of obſervations upon it ought to be followed, even by ſifting into the perſonal character of that man, compared with the other, eſpecially with regard to the moſt ſtriking ſigns, and thoſe ſlight ſhades of difference between them both in every ſenſe.

If upon this compariſon they reſembled each other in all reſpects perfectly, their exterior appearance would prove the conformity of minds and intellects; nor ought this opinion to be controverted, until two men ſo deſcribed were brought together, each poſſeſſing a different turn of mind from the other, notwithſtanding their ſame remarkable faces.

In order to prove or contradict that aſſertion, we ſhould watch the unguarded moment when they diſplay their real diſpoſitions and characters without diſguiſe: if then the line of diſtinction cauſed by

by the moving muſcles correſponded in both theſe perſons, the conformity of their characters would be manifeſt beyond diſpute.

Thus, were ſuch an uncommon feature diſcovered in any ſingular man, as to be noticed again only in the countenance of an illuſtrious character, this diſtinguiſhing mark might be, ſafely pronounced as the ſureſt criterion by which we could judge and find out any ſhade of difference.

This idea may be beſt cleared up by mentioning a caſe in point.

Beſide many traits which the great *Haller* had in common with other enlightened beings, he was diſtinguiſhed by what might be called a ray of literary glory, or a circle under his lower eye-lid, and ſuch as had never been noticed in any other mortal.

Conſequently that trait has not yet been underſtood; but were it diſcovered in any other individual, there would be full ſcope for enquiring whether his genius was like *Haller*'s in any reſpect. At all events, were two faces found with a ſimilar honourable ſtamp, we might take pride in having diſcovered a new letter of the Phyſiographical alphabet.

It is, nevertheleſs, within the limits of probability, that ſo celebrated a writer may have poſſeſſed particular foibles, expreſſed by that particular mark; nor is it impoſſible that the weakeſt man may be

marked like him, without that ſuperior underſtanding, of which we ſuppoſe that Swiſs author bore the ſignificant impreſſion.

In the mean time, it is prudent to ſuſpend our judgment upon theſe ſpeculative notions.

In the choice of objects for ſtudying this ſcience of reading faces, we cannot take too much notice of original and eccentric characters, extremes of vice and virtue, kindneſs and brutality, ſlaviſh ignorance oppoſed to the heavenly gift of poetry, generoſity and ſelfiſhneſs, for the purpoſe of furniſhing contraſts, as conſtant ſubjects of contemplation; nor ought we to loſe ſight of thoſe ſituations where man is reduced to the moſt abject ſtate of miſery.

With this view we might viſit the receptacles of lunatics; trace the cauſes of their inſanity, and obſerve every ſhade that diſtinguiſhes love, melancholy, rage, or diſappointment, according as it breaks out, unreſtrained by reaſon and habits of ſocial life.

In ſcenes like theſe the nervous ſyſtem is diſplayed without art or diſſimulation; all the tender ſtrings of feeling are differently affected, and accompanied with peculiarly natural impreſſions.

Nor ought a Phyſiognomiſt to be leſs anxious to mingle with the moſt enlightened, down to the leaſt poliſhed ſocieties, in order to compare accurately the loweſt degree of ſenſe bordering upon inſtinct, with that ſuperior underſtanding, which would

would be ſeen brilliant, juſt as light is valued when we come out of darkneſs.

But ſhould it appear too difficult a taſk to purſue a plan of ſtudies on a large ſcale, comprehending all parts of the viſage, there are two important lines to be followed, invariably, by thoſe who wiſh to unfold every place in animated ſtuff, marked with a ſlit in the mouth, and a line drawn by the upper lid upon the eye-ball; for theſe lineaments preſent an abſtract or abridgement of a man's face, with a key that the active ſpirit of curioſity might employ in ſifting into the myſteries of our exiſtence, and decyphering ſuch a ſecret correſpondence of the ſoul as exhibits a participation of the Divine eſſence.

The beſt painters have often neglected thoſe traits which defy an inexperienced eye, by their ſoft, delicate, and moveable ſubſtance; but they are beſt diſtinguiſhed in profile. If, however, imitative art cannot ſeize them, let the Phyſiognomiſt read over carefully the fine and eaſier paſſage from the forehead down to the mouth, before he tranſcribes it on his mind or paper. Thoſe double features, taken alternately from either ſide of the face, will furniſh a long exerciſe for a pupil, who muſt feel, as he draws, their perfect equality.

His progreſs would not be ſtopped, were he, for ſome time, to amuſe himſelf with drawing or ſtudying nothing elſe but the compaſs of the upper eye-

eye-lid, and the orifice of the mouth, together with the order and arrangement of every line.

The other lineaments might be juſtly repreſented by ſhadows, or *ſilhouettes*, ſo far as to be ſeparately drawn, ſtudied, and examined with mathematical preciſion.

Although theſe leading features are the moſt eſſential, others deſerve particular notice; for no part ought to be ſlighted, as connected with the whole, impreſſed with a man's character, and proving the moſt perfect ſymmetry in the workmanſhip of the Supreme deſigner, whoſe glorious works were caſt in one mould, unlike unfiniſhed maſter-pieces of art. Thus every kind of eyes is found to be matched with correſponding ears, front, and hair, according to the wiſeſt order of things.

Frequently a neglected part of a book ſerves to clear up obſcure paſſages; ſo the ſlighteſt line may ſerve to unravel a whole ſet of features and complexion. Juſt as an overture conveys to a cultivated ear the ground-work of an opera, ſo we muſt conſider every part of the body as an important link of the chain that unites the perfect human figure; the whole being juſtly compared to a concert of muſic, where not the leaſt note muſt be omitted to preſerve the harmony deſigned.

In the purſuit of theſe ſtudies the pupil ſhould be humoured in following his inclinations for the favourite object of his reſearches juſt as it ſtrikes him;

him; becauſe a paſſion for any branch of knowledge produces the greateſt proficiency conducive to general improvements in liberal arts and profeſſions.

The art of drawing profiles, or ſhadows, cannot be too ſtrongly recommended to a young Phyſiognomiſt, as one of the beſt methods of acquiring a juſt idea of characteriſtical outlines to be drawn exactly for his models.

As this exactitude depends on the manner of forming theſe ſketches from the reflection of a face, always weak upon paper, a ſolar microſcope is uſed to remedy the defect, while the head to be drawn is placed, free and eaſy, as cloſe to the wall as poſſible.

For this purpoſe, a board, hollow below, is placed upon the ſhoulder, four feet five to ſeven inches above the ground, and covered with ſoft paper faſtened and ſealed with wax over the holes in the wood.

Another more convenient method for drawing ſhades is, by means of a mirrour, hollowed below, and covered with oil-cloth. The ſhade is thus quickly drawn, and when it is taken from the frame the lines are retouched wherever the reflected outlines are too weakly impreſſed. Then it may be diminiſhed to a miniature, by avoiding to blunt the edges, or diſorder the angles, of this picture.

One of theſe diminutive copies is blackened, and the ſecond is preſerved blank, for keeping the meaſure

ſure of the inward caſe. Afterwards the large *ſilhouette* is hung up, perpendicularly, to ſerve as a model for the ſmaller profile.

It is by the frequent practice of deſigning, accompanied with remarks and compariſons drawn from the Lavaterian ſchool, that a gradual improvement may be made by any youth qualified and diſpoſed to excel, while at every ſtep he feels convinced how much the ſlighteſt deviation turns a portrait into a caricature.

When a collection of ſuch profiles is procured of well-drawn characters, they ſhould be claſſed under proper heads; but the line of diſtinction between them muſt not be formed by reſpect for intellectual powers, or moral qualities, but wholly from a view of Phyſiognomical analogy; for, whatever traits may characterize men for their talents and virtues, there is ſuch an infinite variety of excellence and imperfections under general denominations, that we are warranted in preſuming a proportioned unlikeneſs of their outward ſignificant ſigns of merit. Conſequently it would be the greateſt abſurdity to claſs together two heads of men of genius, merely becauſe they were of that deſcription, without any other reſemblance, as a ground of expectation for finding them alike; for, probably, they would not reſemble in the leaſt, or form a perfect contraſt to, each other.

But

But in the arrangement of profiles propoſed, the forehead ought to form that diſtinguiſhing feature, according to which their various claſſes might be juſtly fixed. Then were two foreheads to preſent a ſtriking likeneſs, there would be a foundation to ſuppoſe a degree of conformity in the ſouls which animated any two bodies with ſuch peculiarities as might appear from the correſponding curve and angle, which could be meaſured exactly, upon the large ſhadow, from the top of the head down to that inviſible line which paſſes acroſs the crown to the root of the noſe and eye-brows.

The reſult of ſuch obſervations will be a conviction that ſimilar outlines of the head are attended with an equal conformity of faculties, and a like way of ſeeing, thinking, and feeling. It will likewiſe be found, that, as every part of the globe has its diſtinct latitude and climate, ſo all faces and foreheads are ſhaped in a manner calculated for their height and degree of mental capacity.

Such remarks as theſe admit of improvements, from a particular alphabet to be compoſed for the regiſter and claſſing of foreheads; ſo that any one might be diſtinguiſhed, at firſt ſight, by a letter expreſſing its claſs, together with its generical and particular name.

Our great maſter *(Lavater)* has promiſed us a Treatiſe on this ſubject, that ſhall comprize every different form of foreheads. In the mean time, he adviſes

adviſes every ſtudent to compoſe a ſcale of them for his own uſe, perfectly regular, and founded on invariable mathematical rules.

It is alſo a matter of importance to know what characters are moſt truly repreſented by ſhades, and appear in their true light. We ſhall find that lively people are drawn ſo in a more faithful manner than thoſe who are mere paſſive and feeling beings.

Moreover, in learning to read faces, it ſhould be the ſtudent's delight to draw profiles in all ways from Nature, truſting to his memory, ſometimes, ſo far as to add an eye, a mouth, or another feature, wanted to turn them into full faces; as he might do, for paſtime or inſtruction, while he ſifted into the meaning of thoſe poſitive ſigns which he ſtrove to copy, in various points of view, as a fund for his experiments.

He would, likewiſe, derive equal pleaſure and advantage from a repetition of his eſſays to analyſe the moſt impenetrable or unintelligible viſage, by ſeparating every feature from the complicated maſs.

The baſe of that frontiſpiece of ſurpriſing architecture contains the ſum-total of the outlines centering in the ſkull, and all the ramifications darting from the crown of the head. Upon this principle, experience proves what reaſon ſhews,—that this fundamental line in a hearty man expreſſes the degree of his capacity and perfection.

From

From this contour an able Phyſiognomiſt might alſo judge of the general characters of a crowd, and, therefore, it cannot be too frequently drawn, meaſured, and obſerved in every poſſible light; for it eſcapes the firſt glance; but habit will render it more perceptible in proper ſubjects. For inſtance; in a Roman Catholic church, when prieſts ſtoop with their bald crowns, intereſting remarks might be made on their bare upper circle; for ſo much does this part differ in a multitude, that a profeſſor of Phyſiognomy, like *Lavater*, would diſtinguiſh by it the various deſcriptions of people aſſembled at his door.

Indeed, it is not eaſy to obſerve young men well, while they are awake and feelingly alive in the buſtle of buſineſs.

For that reaſon, they ought to be watched in thoſe unguarded hours of ſleep, when they, particularly children, betray by their attitudes the harmony of the body, face, ſkin, and limbs.

Even the manſions of the dead might be viſited, becauſe their faces acquire, in eternal reſt, ſuch an expreſſive compoſure as is not perceptible in any other ſituation, nor till they have ceaſed to breathe.

A man is more or leſs ſtrained or diſtorted with the agitations of this world; but in his coffin, if unchanged by violent convulſions, he becomes a fit ſubject for ſtudents of Phyſiognomy, who exerciſe no imaginary cruelty.

They

They ſhould alſo retrace their deſigns in making comparative remarks upon ancient ſtatues, or at leaſt on moulded figures, which might be copied in different ways, and compared with their own ſketches drawn from life.

After having thus improved in the art of *taking off* the ſolid parts and ſtriking differences between models and copies, their next amuſement might be to ſet up the buſt of Locke, or Newton, to exhibit a contraſt to another of an idiot, while they meaſured, copied, and conſidered both attentively; and if then, from their feelings, they knew themſelves to be judges of faces, their faith in this ſcience would be a ſure omen of greater advancement.

But they would make a ſtill quicker progreſs, ſhould the idea in contemplation be realized of making a *frontometre* (an inſtrument for meaſuring the front, or forehead), in order to diſtinguiſh, at one view, thoſe collateral features which are the true ſigns of lively, baſe, dull, and elevated minds.

Nor would it be a matter of unpleaſant conſequence to perform exerciſes, or read lectures, upon the ſkulls of deceaſed eminent perſonages, drawn in ſhadows or profiles, and placed in a row, where their triangular form would exhibit a ſtriking object of meditation; but, as either reſpect for the aſhes of our anceſtors, or falſe delicacy, forbids reſearches beyond the grave, we adviſe our diſciples to be very reſerved in their conduct and diſcourſe, until

until they ſhall have found their judgement, in matters of this nature, confirmed by evidence and a train of concurring circumſtances. Thus diveſting themſelves of vanity, beginners ought only to try their ſkill at a proper time and place, with equal diffidence and moderation, if they wiſh to render Phyſiology one of the moſt uſeful, pleaſant, and honourable ſciences.

Another important reſource is to be found in thoſe ancient and modern medals which exhibit a curious variety of countenances, and diſplay the caprice of Nature, with an uniformity, however, of virtues or imperfections.

A good Phyſiognomiſt ought to be a thinking man, independent in ſpirit, rich in ideas, and able to expreſs them in the principal languages of Europe; nay, he ſhould even be qualified to compoſe a new dictionary of words and technical terms ſuited to his profeſſion. Thus he might keep a regiſter of extraordinary viſages, duly claſſed and ſpecified, according to the moſt approved ſyſtems; nor ought he to be at a loſs to diſtinguiſh, at once, the different degrees of paſſions, affections; religious, national, and profeſſional looks.

But, before attempting to give names to ſenſations, ſymptoms, and appearances, he ought to be capable of repreſenting them juſtly with his pen and his pencil.

A knowledge of more than one foreign language is of the utmoſt importance for opening a communication with thoſe abſent or departed ſpirits, whoſe congenial thoughts pave the way to trace a ſyſtem equally calculated for information and entertainment. It is true, that many plain folks either do not believe, or affect to ridicule, the fabric of opinions deſigned for thoſe ſalutary ends; but, as they paſs along the crowded walks of both ſexes, let us appeal to their feelings, in order to know whether they are not alternately impreſſed with love, reverence, admiration, envy, ſlight, and indifference.

If ſo, it is evident that they ſee, read, and try to decypher the type of Phyſiography on every reflecting mirror that they meet. Will it, then, be denied that ſuch learning is moſt excellent?

He is a falſe critic who praiſes or condemns a book of which he has ſeen no more than the print, or binding. A painter, however, draws the ſoldier, juſtly, with all his accoutrements and military airs.

But the Phyſiographer muſt deſpair of drawing faithful pictures while he is biaſſed by partiality ariſing from the conſideration of birth, wealth, and power, or prejudiced by a ſudden reverſe of fortune, borne with humility, fortitude, and reſignation.*

A liſt,

* As examples are better than precepts, we may eaſily ſuppoſe a caſe in point:—We hear of two men ſuffering the ſame fate in a different

A liſt, already procured, of four hundred differing human heads might be gradually increaſed by ſuch

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ferent manner.——A venerable elder of the land, after having lived in affluence, is brought down, by an act of arbitrary government, with his gray hairs in ſorrow to the grave! We may obſerve him wearing apace———

Half bent with worldly cares he moves along;
His brows are overcaſt, his viſage low'rs,
While heavily in tears his eyes look down
To ſhun the ſlightful pity of a friend,
Who us'd to ſhare his hoſpitable houſe,
But feels no reverence for age oppreſs'd
By war, the ſcourge of nations, and his bane:—
Nay, all *Lavater* ſees at once denotes
A ſpeedy diſſolution with the cauſe,——
The plague incurable——A broken heart!

But under ſimilar circumſtances the companion of his youth is ſeen to weather the ſame ſtorm with a ſerene countenance, looking up to Heaven, enjoying life as it paſſes, with ſpirits becoming a rational creature.

Whence, then, ariſes ſuch a difference in feeling and diſcovering their ſecret emotions, if we imagine them both well born and bred in Wales, endowed with equal qualities of the head and heart, and victims to pride, deceit, or ingratitude? A compariſon of their figures will ſolve this queſtion. We ſhall find them poſſeſſing a degree of conſtitutional ſtrength, a frame of body, a nervous ſyſtem, with a ſet of features and complexion correſponding with the greater and leſſer vigour of mind diſplayed on thoſe occaſions, under the viciſſitudes of fortune; or the primitive, permanent, and Phyſiographical ſtamp on each of them will be found to tally with the reſpective de-

ſuch compariſons as we recommend to be made, in various ranks and ſituations of life, in order to attain what we may juſtly call a quick ſixth ſenſe of comprehending with half an eye the ſecret ſign peculiar to each ſtation, trade, country, taſte, religion, wit, raillery, comedy and tragedy, in every real ſcene that we witneſs on this ſtage of life.

In ſtudying a viſage, painted or engraven, when its proper title is found, the contour of the head ſhould be copied exactly, at leaſt on a rapid ſketch; but if a ſtriking object could not be penetrated by a ſuperficial look, a negative quality would furniſh an index, by comparing it with other claſſes, until either a reſemblance or its peculiar originality was aſcertained.

The more difficulty there was in diſcovering any claſs to which ſuch a new face belonged or reſembled, ſo much the greater right would the ſtudent have to call it an original that promiſed him freſh diſcoveries. Nature has formed mankind in the ſame perfect mould, without deviating from her juſt proportions any more than a ſtraight line,

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grees exhibited of ſenſibility. The reſpectable and cenſorious part of the community ought, therefore, to be on their guard in judging their neighbours by mere appearances, without attributing to inſenſibility or improper aſſurance the bold looks of a man, who, under a cloud, dares to read the faces of his ſuperiors in riches,—his equals only in honeſt pride and integrity.

notwith-

notwithſtanding an infinite variety of forms and complexions. Thus every individual whoſe figure differed, upon the whole, from that general ſtandard, would be a monſter, unleſs ſuch a difference proceeded from accident. On the other hand, according as a human figure is found proportioned to Nature's rule, ſo muſt we call it perfect in the ſame degree.

A deformed outſide may cover the ſtrongeſt faculties,—juſt as Genius and Virtue are often concealed in a mean cottage; yet, ſince there are houſes unfit to receive human creatures, we likewiſe find ſuch forms as are not calculated for the reception of ſhining talents and noble ſentiments.

Conſequently we ought ſtudiouſly to enquire into what kind of temporary dwelling is beſt adapted to ſuperior beings on earth, while we view with pity the inferior rank of other diſproportioned frames, which ſtill admit the greateſt powers of the mind and goodneſs of heart, to be diſplayed with ſo much the greater energy from the confined accommodation given to theſe qualities.

When a leading feature of the face is expreſſive, the companion to it will be found equally ſignificant; for both are formed agreeable to the ſame wiſe ſyſtem.

There is nothing without a cauſe, or all things muſt be attributed to general cauſes.

Whoever doubts this principle need give himſelf no further pains to learn Phyſiology.

The handſomeſt face is liable to be injured, and the ugliеſt will admit of embelliſhments; while neither loſes by theſe changes that primitive ſtamp by which it was firſt diſtinguiſhed.

While a promiſing youth ſtudies thoſe variations, for the better or worſe, let him connect the idea of a good action with an ugly countenance, and conceive beauty ſpoiled by vice.

The moſt expreſſive traits indicate ſtrong faculties; but the want of ſuch outward ſigns afford no proofs of weakneſs.

Whenever a very diſproportioned viſage comes in our way, we ſhould peruſe every line in it carefully, eſpecially if we could match it with another of an oppoſite deſcription, ſo as to furniſh at once the two extremes of perfection and deformity, which would be a pleaſing ſight to a curious Phyſiognomiſt, who might then truſt to the firſt impreſſions that they made on his mind, rather than to his own obſervations on ſo ill-matched a couple; yet, whatever he felt on ſeeing them together, and reading over the leſſon that ſuch contraſted traits preſented, it would be incumbent on him to trace his emotions to their pure ſource at the ſame time; that, by drawing every feature, form, and mien, he might appeal to ſeveral judges, from his own ſelf-evidence or conſcious knowledge of Nature's language,

guage, expreſſed in too plain terms to be miſunderſtood or called otherwiſe than inſpiration.

In this ſtudy there is no remark too trifling to be made upon the difference of ſtature, and other diſtinctions of the human race, peculiar to various countries and claſſes. Nor muſt the voice paſs unnoticed; for, as the Italians mention it in their deſcription of a perſon in paſſports, ſo ought we to diſtinguiſh a ſweet or harſh ſound, in order to diſcover what particular voices are ſuited to particular heads, diſpoſitions, and characters.

Every Phyſiognomy has its own peculiar expreſſion, in addition to general characteriſtic ſigns:—for inſtance; all thinkers have not ſuch ſedate countenances as clearly announce ſerious reflection, except by knitting their brows; nor even is benevolence expreſſed by ſome people otherwiſe than by a ſmile, or a grin, while they mark diſpleaſure only by triangular lines in the cheeks, &c.

But, in attending to appearances of ſatisfaction or diſcontent, we ſhould diſtinguiſh between natural and forced, or accidental diſtortions.

Accidents have been repreſented as forming an inſurmountable bar to the ſtudy of Phyſiography; but ſurely a child knows natural marks from others,—as in the ſmall-pox, a diſorder that ſpoils ſome fair faces, without injuring the form.

Indeed, in ſome caſes, a fall has been attended with mental derangement, but no ſtriking deformity;

yet the conſequent ſtate of mind was viſible in the countenance, and ſome change in the body.

On many occaſions a man may be known by one expreſſive characteriſtic ſign at leaſt; his leading features are ſufficiently plain to denote his ruling paſſion; for often the forehead, noſe, lips, and eyes alone, or well-aſſorted with other traits, expreſs either ſolidity or inconſtancy, vivacity or coldneſs, ſagacity or ſtupidity, love or hatred.

But, as we have before obſerved, every trial of ſkill in penetrating a man's character ought to be attended with continual examinations of the moſt diminutive parts of his Phyſiognomy, which muſt be ſeparately compared with the whole and correſponding appendages, or the moſt minute expreſſions of mother Nature.

In learning early to diſtinguiſh candour from duplicity, a good pupil will be ſoon enabled to ſee through thoſe faces which, like wax, admit every freſh impreſſion; and ſince they are ſo ſoft and pliable, it muſt be leſs difficult for him to foretel the changes incident to them according to circumſtances. In the mean time, he will ſay to himſelf,—That face was formed to wear perpetual ſmiles; and another does not fit ſuch a man, as, from his infancy, has ſucked the milk of human kindneſs.

To this it might be ſaid,—The moſt quiet man living is ſometimes ſubject to fits of paſſion, like another

another who is continually violent: thus the ſame Phyſiognomy may expreſs, by turns, both anger and good-nature. But it muſt be likewiſe admitted, that there are features on which the ſtamp of theſe oppoſite tempers are too deeply impreſſed to be effaced by tranſient impreſſions.

In this caſe, the Phyſiognomiſt will diſcern every kind of natural diſtinction, far different from thoſe eruptions of a moment which leave no trace behind; for whatever change, for the better or worſe, may originate from the manner of thinking, habit, and good or evil communication, a man's ſoul is to be ſeen through the veil, without the poliſh or brutality received in ſociety.

It is from a perfect harmony between the leading features that concluſions are to be drawn without riſque. If from the form of a mouth, or the ſound of a voice, we cannot foretel exactly what a poet born is going to ſay, it will not be difficult to form a juſt conjecture reſpecting what he would be capable of expreſſing under ſuppoſed circumſtances.

With a view to diſcoveries, every intereſting ſituation muſt be cloſely obſerved,—ſuch as an unforeſeen meeting, and firſt appearance of a ſtranger, or his departure from any circle.

We ſhould likewiſe ſeize thoſe moments for ſtudying faces, when paſſion is on the point of breaking out into violence, then reſtrained, and at laſt ſuppreſſed, by the preſence and influence of a reſpectable

ſpectable perſonage. In ſuch a ſcene, the united effects of diſſimulation would be ſeen mingled with the parting traces of indignation.

In other caſes, a ſimple motion proceeding from tenderneſs, grief or rage, zeal or envy, will ſuffice to exhibit an unknown character in a true light; nay, we need only ſet a perfect calm in oppoſition to the ſtorm of paſſions, in order to judge what any individual is or is not, and may or may not become at a future period of his life, by comparing him, at his eaſe with himſelf, ruffled by ſtrong agitations of mind.

In the courſe of our Phyſiographical ſtudies, ſhould we caſually meet with a perſon who poſſeſſed the rare gift of liſtening with a tender concern to another's ſtory, from beginning to end, before ſpeaking a word, we ought, ſurely, to read every line of his countenance with that intereſt which he inſpired; at the ſame time that we admired his eaſy manner of anſwering with dignity, but without aſſuming any imperious airs of ſuperiority.

Certainly attention is a ſign that denotes not only goodneſs of heart, and a degree of judgment, but likewiſe a great and ſteady mind; for he who cannot bear patiently to hear others ſpeak firſt, has no pretenſions to true merit; but a man who remains ſilent till a fit opportunity offers for him to

deliver his ſentiments deliberately, may expect ſucceſs from his boldeſt enterpriſe.

A punctual plain dealer in buſineſs is no leſs deſerving of our notice, while he attends aſſiduouſly to one thing at a time. Every motion indicates his ſolid turn; nor is there any fear of miſleading the riſing youth, if we declare that circumſpection, in the ſmalleſt affairs, is a ſure ſign of the ſame prudence in matters of the greateſt conſequence.

If the following traits correſponded with each other in one face, they would form a model of perfection:—

The forehead, noſe, and chin ought to be in a juſt relative proportion.

The front, or upper ſtory, of this noble ſtructure, ſhould be fixed upon a baſe almoſt even on an horizontal line, with cloſe, full, and ſtraightiſh eyebrows.

We might prefer either ſky-blue, or ſuch darkiſh eyes as appear black at a ſhort diſtance, with well-proportioned eye-lids, covering only the fourth or fifth part of the ball.

A prominent becoming noſe ſhould be placed on what is called a large bridge, equal on the ſides, with a ſlight bent.

A mouth, elegantly ſlit, ſhould have the upper lip ſloping downwards to match the lower one, of equal breadth, adjoining to a round-peaked chin. Another principal ornament to ſuch a head would be,

be, ſhort auburn or cheſnut hair, growing out into large flowing and natural ringlets.

Such a viſage, with eyes ſhut, ought to be ſtudied in five different ways;—in profile, a full face in front, three-fourths, ſeven-eighths, and, laſtly, in a perpendicular attitude from the crown downwards in a direct line.

When the whole Phyſiognomy is preſented to the obſerver at one full view, it diſtracts his attention by too many objects, which are beſt examined ſucceſſively on both ſides.

A knowledge of drawing is abſolutely neceſſary for the art of reading and copying faces; but whether a learner copies from Nature, ſtatues, paintings, or engravings, he ought to confine himſelf to take ſketches, or outlines, in a manner adequate to the purpoſe of diſtinguiſhing, abſtracting, ſimplyfying, and explaining confuſed or intricate features.

Thoſe fine drawings, the celebrated Paſſions of Le Brun, afford ſufficient proofs of the neceſſity and utility of this ſiſter art as a companion to painting, and a guide to Phyſiography, although it has been neglected, as much as *Lavater*'s ſcience, by ſeveral profeſſors.

But, while the ſtudy of paintings in oil may be ſafely recommended to the young Phyſiognomiſt, we cannot too ſeriouſly warn him againſt the abuſe of deſigns drawn with black-lead pencil, and miniatures,

miatures, becauſe they lead to that looſe and incorrect method, which, inſtead of pictures, produces mere caricatures of Nature. Red lead and Indian ink would form more ſtanding colours for ſketching profiles, in a pretty dark apartment, with a ſmall light received from a hole of one foot diameter above the head to be drawn, and placed ſideways.

A ſky-light, falling perpendicular, might anſwer better for flat or delicate viſages, but not for thoſe with ſuch ſtrong muſcles as would baffle the impreſſion of a ſhadow in that way.

A *camera obſcura* might be adapted to the other method pointed out, by which the object would be diminiſhed three-fourths of its ſize; and if the deſign could not be ſo compleated, on account of the motion, it would ſerve to produce a juſt ſketch of the outlines.

ESSAY XVII.

On the Uſe of Paintings, Portraits, &c.; with a ſhort Account of the beſt Painters and Profeſſors of Phyſiology.

HISTORICAL paintings and portraits of the firſt maſters cannot be too diligently ſtudied.

The great defect in this profeſſion, has been the ſlighting of thoſe trivial peculiarities which diſtinguiſh every individual, as much as his ſhape or complexion. Conſequently the Phyſiologer muſt not be conſidered as a ſervile copyiſt, if he hides no flaw, nor paſſes over the leaſt ſpeck that indicates a deviation from the paths of Virtue;—ſuch as the inhabitants of great towns quickly diſcover, from their habits of viewing and comparing the frail part of the fair creation with modeſt matrons.

Titian is a model for the moſt excellent copies of blooming beauties. His Venus, in the Grand Duke's Gallery at Florence, is fleſh and blood.

Michael Angelo's deſigns contain the juſteſt expreſſions of imperial power, *eaſy* dignity, preſumptuous conſequence, proud diſdain, and undaunted courage.

Rubens

Rubens excelled in repreſenting fury, drunkenneſs, and other exceſſes. He and Van Dyke have left us maſter-pieces in the higheſt ſtyle.

Raphael painted, in a ſtill more majeſtic manner, both divine and noble figures, with thought, image, and ſentiment inimitable.—Guido's heads are lovely, correct, and noble.

Salvator Roſa needs only to be named in the firſt rank of Italian painters.

Pouſſin, Le Sueur, and Le Brun, did honour to France. Others, from Kneller to Reynolds, gained fame and riches in England.

Teniers ſtill ſtands foremoſt in repute, for having repreſented national humour, innocent ſports, and gambols. The Flemiſh ſchool, likewiſe, produced Gerard Dow, who drew rogues as they are, and true pictures of low life.

Holbein excelled them in expreſſing candour and ſimplicity. Hogarth followed him in the ſame line with equal or greater ſucceſs. His *Harlot's Progreſs*, and *March of the Guards*, prove him to have been a Phyſiognomiſt, who did not omit a ſingle trait that expreſſed vulgarity, ridicule, and the horrors of diſſipation.

For harmony, compoſure, and ſerenity, Mengs, his wife, and children, will be remembered ſo long as their pictures, drawn by him for celeſtial beings, exiſt as ornaments to the Vatican.

Weſt

Weft ſeems to be endowed with the ſame pacific genius as diſtinguiſhes that religious ſociety of which he is ſo eminent a member.

Callot, Bath, Goltbius, De Vos, Leyde, Brandt, Scullemberg, La Fage, and Rembrandt, were excellent painters of droll, comic, and convivial ſcenes.

For tender mothers, fine children, and attentive ſervants, we refer the ſtudent to Chodowiecke's works, containing a repreſentation of thoſe faſhionable airs and geſtures which prevail in courts, camps, and cities.

Fuſeli paints giants, and every gigantic object, in a manner that preſerves his name from oblivion.

Superior to many, inferior to none, Annibal Carracci excelled in the ſame way, particularly in repreſenting mirth and jollity*.

To Phyſiognomiſts we recommend the portraits of Metzu, with the modeſt ſuffering countenances drawn by Laireſſe. Wilkenboon ſhould be conſulted for the juſt traits of irony; and Spranger for expreſſions of rage.

It

* Jenkins, of Rome, took up the pallet in his younger years with a degree of reputation that paved the way to eminence in another career. His portraits are ſcarce; but ſhould his collections of every kind be preſerved, they would form a valuable inheritance, whenever the fate of war might decide, without impoveriſhing his amiable niece, or neareſt relatives; becauſe, happily for them, he acted, as a banker, upon this wiſe principle,—that the walls of Temple Bar were

It would be superfluous to dwell on the advantages to be derived from the study of such invaluable master-pieces as are known to every eminent artist that has seen a little of the world. Let it suffice to add, what an ingenious student will feel as he proceeds, that there is no walk in life wherein a penetrating eye may not see through the mask that education or hypocrisy throws over a *countenance* and *character*, when both are duly compared, with a distinction betwixt the original face and acquired appearance: thus he may learn to judge how much outward signs correspond with secret inclinations. At first sight, he will know such a man as is degraded by imprudence or excesses, not only in his own estimation, but in the opinion of his neighbours, whose eyes he constantly avoids.

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were the safest rampart that the *Childs* could throw around his well-earned fortune. He is now no more, having died at Harwich, on landing with a part of the treasures brought from the Roman Museums. While he lived,—as the needle points to the North, so did his British heart point towards his native home, after an absence from it of half a century. A surviving friend and correspondent pays this tribute due to his memory with the tear of sensibility.

Poor Jacob More's departed spirit has a claim to equal homage from the same friendly pen, although his genius was of a different cast. His style of painting was generally confined to ruins, landscapes, and the grandest scenes: his Eruptions of Vesuvius, drawn on the spot, will have a place in the best cabinets of Europe, so long a burning mountains shall leave a trace behind.

But ſhould he meet with viſages impreſſed with marks of paſt lives, or ſenſations unknown to him, a reference to his models at home would ſoon enable him to unravel the myſtery, by a compariſon with ſome of Le Brun's, or other profiles in his collection. However that may be, it is incumbent on the Phyſiognomiſt to pronounce his judgment upon any one's good name and private conduct, only from proofs, and with great caution.

The number of good writers on this ſubject is inconſiderable: a fortnight would ſuffice for the peruſal of all their works, which deſerve praiſe or comment.

Porta has collected the moſt eſſential obſervations of ancient authors, but not with a due diſtinction between truth and viſionary notions. His reflections, however, are intereſting, and explained by the faces of celebrated characters.

Peuſchel and Pernetti followed Porta's example, without determining preciſely the features of a face diſtinguiſhed from caſual appearances. This diſcrimination is ſo neceſſary, that, without it, we might juſtly apply to Phyſiography what Pope has ſaid—

"A little learning is a dangerous thing."

Helvetius, in his *Phyſiognomia Medicinalis*, has treated different conſtitutions with great propriety; and, notwithſtanding his partiality for aſtrology, he is

is entitled to the firſt place among the profeſſors of Phyſiology.

Huart's work, with all his undigeſted ideas, is worth reading; for, if he makes no freſh diſcoveries, ſeveral excellent paſſages, taken from Ariſtotle, Galen, and Hippocrates, are produced by him in ſupport of his curious remarks.

Philip May gave few inſtructions.

But La Chambre was a judicious writer, who ſucceeded in deſcribing paſſionate characters ſo well, that, while reading his deſcriptions, we cannot help regretting the omiſſion of proper engravings.

Jean de Hagen's portrait in the frontiſpiece of his Treatiſe makes an impreſſion. We need ſay no more, than that both are worth a glance, eſpecially as he has copied from other maſters.

Marbitius attempted to found a new ſyſtem for the arrangement of human features, which, abſurd as it appears, has been adopted by a modern writer. His Eſſay is entitled, *De Varietate Facei Humanæ*; and printed at Dreſden in 1675.

Parſons is a claſſic author, whoſe works Buffon and Haller took the trouble to abridge; for, notwithſtanding any imperfections, nobody has excelled him in treating the moveable traits,—the muſcles of the face, and language of the paſſions.

Jacob Bohme, an obſcure Deiſt, was a cloſe obſerver of Nature, whoſe expreſſions were familiar to him; and he knew how to ſift into the meaning

of every minute diſtinguiſhing trait. His Eſſay on the Four Kinds of Complexion is a jewel in the eyes of a good Phyſiognomiſt.

Guglielmo Gratarole, a Phyſician of Bergamo, likewiſe tranſmitted his name with honour to poſterity, in a book whoſe title is, *De Prædictione Morum Naturarumque Hominum, &c.*

Scipio Claramontius, likewiſe, wrote with eaſe and elegance, as a man who had probed the inmoſt receſſes of the heart, and ſtudied the mental faculties, in a manner that proved his informations derived from the pureſt ſources. Some errors of his predeceſſors have, however, crept into his valuable Treatiſe, *De Conjectandis cujuſque Moribus & Latitantibus Animi Affectibus*, which deſerves to be perfectly underſtood by every one who ſtudies the uſeful art of reading human faces; but, with all his ſcholaſtic reaſoning, we muſt give him credit for new original ideas, and judicious remarks, written in a ſtyle that exhibits a noble and liberal way of thinking.

The compariſon of great men with their lives and pictures, as they ſtrike us in hiſtory, or act their parts before us, would afford a perpetual fund of knowledge and entertainment, adapted to a ſalutary end. But the beſt ſchool, and where the young Phyſiognomiſt ought to finiſh his ſtudies, is the ſociety of honeſt men, whoſe virtues and perfections he

he would find out, by ſearching with friendly eyes and a pure heart.

Let him, then, ſhew a cool indifference for the idle queſtions of buſy-bodies, who appeal to his opinion with no better view than to render him an object of ridicule. His ſkill will not be diminiſhed by reſerve; nor ought any ſtudent to give himſelf up to theſe purſuits, without feeling this ſelf-perſuaſion,—that he is endowed with the qualities required for ſuch a ſcience. In this caſe, he would anticipate the pleaſure of diſcovering wonders, as a ſufficient recompenſe for the troubleſome but delightful taſk of reading the book of Nature, and ſtudying the features of all living creatures, from man to plants.

ESSAY XVIII.

On the Features of Animals.

BRUTES differ from each other in character and diſpoſition, as much as they do in ſtature and the conſtruction of their bones.

Every ſpecies has a peculiar ſet of features that diſtinguiſhes them all,—from the imperial eagle down to the weakeſt inſect, or from the creeping worm up to the formidable lion and gigantic elephant.

At the firſt ſight of theſe creatures, or on ſeeing the lamb, the ſerpent, and butterfly, without the leaſt knowledge of their names and power, would a child be at a loſs to attribute to them their reſpective degrees of ſtrength and courage?

Among animals, that claſs is the weakeſt, and leaſt capable of receiving ideas, which differs the moſt from mankind in their outward form. This aſſertion may be proved by a glance at the various claſſes; or even a compariſon of their figures, in idea, ſuffices for a demonſtration.

Through the whole range of animal creation not a ſingle brute is to be found, that is not quite different from man in exterior appearance and inward

ſtructure; for every kind has received from the Supreme deſigner a ſet of invariable lines, as we ſhall hereafter demonſtrate, after obſerving, that it would have been an operation becoming ſuch enlightened men as Buffon, Linnæus, Camper, and Euler, to have aſcertained the forms of heads by a regular ſtandard fixed on mathematical principles.

For inſtance; the ſtriking diſtinction in a man's face from all others, is the regular proportion of the fore-part, which forms a perfect oval, whoſe parts, being regularly divided, are preſerved in equal ſymmetry.

It is in that reſpect that brutes are infinitely inferior to us, although they reſemble in the hind part of the ſkull.

Thus in paſſing a line from the root of the teeth of the upper jaw, through the moſt forward bone of the forehead, to croſs another horizontal line on the whole cheek, from the root of the noſe to the lower end or orifice of the ear, theſe two lines united would form an angle of about eighty to ninety degrees.

From the baboon downwards on the ſcale of beings, all animals differ from that form more or leſs; and their inſtinct appears to be ſo much the more limited, according as the union of thoſe two lines forms in them a more pointed angle.

Conſequently, as mother Nature ſeems to have fixed a viſible connection between exterior forms

and extent of faculties, it is eaſy for a naturaliſt to judge of any animal's degree of reaſon, or inſtinct, from the form of the bones in his head. Accordingly fiſhes, who are the flatteſt living creatures, have faces, which preſent a more pointed angle by the junction of two ſuch croſs lines.

The human face furniſhes the form of an egg, rather wider above than below. If we divide this oval figure into two diameters, the largeſt will ſplit into two equal parts the forehead, noſe, mouth, and chin; the ſmalleſt will likewiſe divide the head into two portions, alike at the root of the eye-brows. Theſe parts being again divided, will produce, in regular portions as before, one the root of the hair, and the other the tip of the noſe.

The fourth diviſion, by being divided into three parts, will contain the mouth and ſource of the chin.

The baſe of the noſe, with its tip, forms a triangle of equal ſides, of the ſize of the mouth or eye.

Between both eyes there is ſufficient ſpace for a third, or a noſe. The noſe and forehead ſhould be ſeparated only by a ſlight and almoſt imperceptible bent.

Monkeys come neareſt to the human figure: the ouran-outang bears the ſtrongeſt reſemblance to man; but the ſuppoſed likeneſs will not appear well-founded; nor can this wild creature's pretenſions ſtand the teſt

teſt of examination; for his natural brutality breaks out under the maſk that Nature gave him to conceal his inferior rank.

His real character is known by his narrow forehead, ſo different from a man's, as well as from the want of white in his eyes; or, at leaſt, it is imperceptible.

He is likewiſe diſtinguiſhed by the near approach of his eyes, or ſockets; and this proximity is more ſtriking when the ſkull-bones are ſtripped of their fleſh and muſcles.

His noſe is exceſſively flat, too ſmall above, and cruſhed down below. While a man's ears are placed on a level with the noſe and eye-brows, the monkey has the ſame parts nearer the crown of his head. The ſpace between his noſe and mouth is almoſt the whole length of his chin; but in a human being it is generally but half ſo long.

His lips are faſtened to his teeth, forming the key of an arch, as in other brutes.

It is unneceſſary to puſh this compariſon any further; but it muſt be granted, that this animal has a ſerious gait, and a melancholy look. He is good-natured and thoughtful, having neither the impatience of a baboon, nor does he play the miſchievous tricks of other apes.

After the man of the wood, the gibbon is the next reſembling the human being in ſome degrees, particularly in the ſkull; but notwithſtanding his mild

mild diſpoſition and gentle manners, his figure, upon the whole, is materially different from our's; for, even as he ſtands, his diſproportioned arms reach the ground, while the brute appears, either by the wide diſtance between his mouth and noſe, or by the nearneſs of theſe two parts, without any ſymmetry of features.

Some of theſe brutes, however, are not ſo ugly as they generally appear; nor would it be proper to diſguſt our readers with their particular deſcription; but, paſſing over various kinds who inhabit the coaſt of Africa, we muſt mention the Chineſe bonnets, or monkeys, who can only be half tamed; yet they catch crabs or lobſters very dexterouſly, by entangling their tails with the claws of ſhell-fiſh.

In the claſs of four-footed animals, the horſe is moſt eminently diſtinguiſhed for his beautiful figure, courage, ſtrength, docility, and uſe to mankind: he unites with a regular ſhape both elegance and juſt proportion in all parts of his body. Who better than the Sacred Writer* could deſcribe this noble animal, the friend and companion of man?

Compared

THE HORSE.

* Haſt thou given the horſe ſtrength? Haſt thou clothed his neck with thunder? Canſt thou make him afraid as a graſhopper?

The

Compared with other brutes, he riſes far ſuperior to moſt of them in the ſcale of creation. What an

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The glory of his noſtrils is terrible. He paweth in the valley, and rejoiceth in his ſtrength. He goeth on to meet the armed men. He mocketh at fear, and is not affrighted; neither turneth he back from the ſword. The quiver rattleth againſt him; the glittering ſpear and the ſhield. He ſwalloweth the ground with fierceneſs and rage; neither believeth he that it is the ſound of the trumpet. He ſaith among the trumpets—Ha, ha!——and he ſmelleth the battle afar off; the thunder of the captains, and the ſhouting!

Here, then, are the moſt ſprightly images of this generous beaſt expreſſed in ſuch energetic language as would have furniſhed models of the ſublime to thoſe ancient writers who were unacquainted with the book of Job. Thus the ſacred Poet makes all the beauties to flow from an inward principle in the creature that he deſcribes; but the beſt claſſic poets have confined their following deſcriptions of him to his outward figure, lineaments, and motions.—In Homer's Iliad there is this beautiful ſimile, to which an Engliſh Bard has done juſtice:——

Freed from his keepers, thus, with broken reins,
The wanton courſer prances o'er the plains;
Or in the pride of youth o'erleaps the mounds,
And ſnuffs the females in forbidden grounds;
Or ſeeks his watering in the well-known flood,
To quench his thirſt, and cool his fiery blood.
He ſwims luxuriant in the liquid plain,
And o'er his ſhoulders flows his waving mane;
He neighs, he ſnorts, he bears his head on high,
Before his ample cheſt the frothy waters fly.

Virgil's

an air of dignity there is in his head and neck!—But the rhinoceros and elephant are clumſy and unwieldy;

Virgil's deſcription has been thus tranſlated:——

The fiery courſer, when he hears from far
The ſprightly trumpets, and the ſhouts of war,
Pricks up his ears, and, trembling with delight,
Shifts pace, and paws, and hopes the promis'd fight.
On his right ſhoulder his thick mane reclin'd,
Buffles at ſpeed, and dances in the wind.
His horny hoofs are jetty black, and round;
His chin is double;—ſtarting with a bound
He turns the turf, and ſhakes the ſolid ground.
Fire from his eyes, clouds from his noſtrils flow;
He bears his rider headlong on the foe;
And in his noſtrils rolls collected fire.——

Lucan expreſſes the circumſtance of ſhouting with great ſpirit:——

So when the ring with joyful ſhouts rebounds,
With rage and pride th' impriſon'd courſer bounds:
He frets, he foams, he rends his idle rein,
Springs o'er the fence, and headlong ſeeks the plain.

Pope, in his Windſor Foreſt, has ſeized the true ſublimity of the ancients, thus:——

Th' impatient courſer pants in every vein,
And, pawing, ſeems to beat the diſtant plain;
Hills, vales, and floods, appear already croſt,
And, ere he ſtarts, a thouſand ſteps are loſt.

However familiar theſe extracts may be to ſome readers, it is to be hoped that they will admit them as better than any vain attempt

unwieldy; the camel is deformed; the lion thick-headed; the aſs ill-ſhaped; and the ox ſhort-footed.

A horſe's tail ought to be long, waving, and proportioned to his ſize. A right medium guards him againſt thoſe inconveniences to which every rider is no ſtranger.

His head ought to be dry and ſlim, without being too long; his ears, not diſtant from each other, ſmall, ſtraight, fixed, ſlender, and placed high on his head. The forehead ſhould be narrow, and a little convex, or riſing in a circular form like the outſide of a globe; with plump cheeks, thin eye-lids, clear, lively, and ſparkling eyes, pretty large, and even with his head, with a large ball or apple of the eye: his nether jaw lean and ſlim; the noſe a little bent; a thin partition; open and well-cloven noſtrils; delicate lips, with a middling ſlit; high and ſharp withers; dry, flat, and pretty broad ſhoulders; his back ſmooth, but ſloping inſenſibly lengthways, and riſing on both ſides of the ſpine or back-bone, which ought to appear as if it were driven into his body.

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tempt to convey the ſame ideas in a modern ſtile, adapted to the more refined or corrupted taſte of the times: nay, had Dr. Sue been converſant with Pope's writings, he likewiſe would have quoted and admired the preceding ſublime lines on this noble animal, the favourite friend of man.

His

His flanks ſhould be full and ſhort; the buttocks round and plump; the haunch well-garniſhed; the ſtump of his tail thick and ſtrong; his legs and gaſcoins large and fleſhy; knees round in the fore-part; wide ham; the bit ſmall forward, and large on the ſides; ſlender joints at the ſhin; looſe ſinews; thin fetlock; large and longiſh paſtern; his coronet a little raiſed; hoofs high, with black, ſmooth, and ſhining horn; the hind-part round, with large and pretty high ſides; the fruſh thin and lean, with thick and hollow ſoles.

The horſe's mane is ſuited to his head, adorns his neck, and gives him a ſtately look; while his buſhy and trailing tail ſets off to advantage the hind parts of his body. This ornament conſiſts of thick and long hair, which ſeems to grow out of his back, becauſe the rump, where it originates, is very ſhort; and although he cannot raiſe it, as the lion does, it is no leſs uſeful to him, ſince he can uſe it ſide-ways to keep off troubleſome flies.

The greateſt conqueſt ever made by man, was in forcing this high-mettled animal to ſhare with him the toils and glories of war, the ſports of the chace, the race, or the tournament. Brave as his maſter, he flies in the face of danger, takes delight in the din of arms, and, like a gallant ſoldier, he advances or retreats at the word of command, having no other will of his own than to diſcharge his duty, ſubject to military diſcipline: nay, after having

having strained every nerve in executing orders with equal docility and exactness, he takes pride in anticipating the pleasure of his superior, and even rejoices to meet a glorious death in the field.

In short, Nature has inspired the horse with love and fear of man, together with a due sense of his dependence, and want of our protection.

The dog is another domestic animal, equally attached to the human species.

He surpasses others in his high, but disproportioned, forehead, for the advantage of that feature is left by other deformities; particularly the brutish shape of his snout, adapted to the strong sense of smelling; and accompanied with fallen chaps, or rather no chin at all.—Buffon's opinion is, that a dog's dangling ears are characteristic signs of his slavery.

The hare and rabbit have every appearance of that excessive lechery, and low gluttony, by which they are distinguished.—What a contrast there is between their shape, and a man's regular side-face and majestic figure!

The goat* appears to be, in some measure, a caricature of the sheep; an emblem of avarice, and, in every respect, a mean, if not a despicable brute.

Who

* Dr. Sue's description of the goat is,——"La chevre paroit être quelque sorte une caricature de la brebis: on croit y voir l'emblême

Who can look at the hog without perceiving all the ſigns of meanneſs from his ears to the tip of his ſnout, with a treacherous eye, and a miſchievous grunt?

The mouth of an aſs retraces every idea of ſtupidity and ſtubbornneſs; his heavy and ſlovenly head is the type of his character.

The camel and dromedary rank as if they were a compoſition of the horſe, ſheep, aſs, and monkey, without having inherited their nobleſt features. Differing from other uſeful animals, they have no mouths calculated for the bridle; nor is the ſpot where they can bear it marked with any ſign of ſpirit and mettle. Their other features are equally mean, and expreſſive of their ſervility.

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lienne de l'avarice: un caractere de baſſeſſe ſenſible perce au travers de l'enſemble, & de chaque partie conſiderée ſeparement."

It is true, that the goat appears to be, in ſome meaſure, a caricature of the ſheep. Poor, and ill-fed, he bears the ſtamp of avarice, with ſomething of that beggarly poverty which prevails in thoſe highlands where he is beſt known; but when the female has fared ſumptuouſly in the valley, ſhe looks as plump as an Engliſh matron. Indeed, all mountaineers profeſs the greateſt reſpect for this animal, whoſe milk they drink from their infancy. In their partial eyes, his whitiſh beard reſembles thoſe gray hairs which formerly diſtinguiſhed the Druids and elders of the land. Even that miſery, which a high-bred naturaliſt may deſpiſe, ſhews the ſpirit of independence peculiar to Wales, where he ſtill browſes like St. David's ſon, an Ancient Briton, who prefers the humble fare of his native rocks, to all the luxuries of England without his liberty.

The

The bear's looks announce his ferocity and deſtructive power. Fond of deſerts, he avoids the buſy walks of men.

The boar is equally remarkable as a wild beaſt, whoſe coarſe aſpect announces his vile and voracious diſpoſition. The hedge-hog, likewiſe, bears the ſtamp of his character for diſtruſt, malice, and gluttony.

The lion's profile is ſuited to his high rank as the king of animals. His majeſty appears in a ſtriking manner, when we obſerve the contour of his forehead, with a ſtraightiſh angle which the outline exhibits from his moſt prominent feature down to the lower jaw. His other traits are equally expreſſive of power and dignity.

A man who reſembled this animal in the face would certainly paſs for an extraordinary character; but we doubt that ſuch a perfect likeneſs will ever be found.

Treachery and blood-thirſty rage are ſtamped in legible characters on the tiger's eyes and muzzle.

Cats are tamed tigers, of a ſmaller ſize; weaker, but no better natured, except ſo far as their manners are poliſhed. Thus they ſurpaſs the largeſt ſpecies in refined cruelty towards birds and mice, by taking pleaſure to prolong the ſufferings of their victims.

The buffalo's frightful figure indicates his brutal inclinations to ſtrike and throw down whatever comes in his way.

The head of an ox has every line that marks his ſtupidity, patience, and obſtinacy; particularly the diſtance of his eyes, awry, as they are, in this direction ; with the crooked traits of his muzzle.

The bull appears to poſſeſs a greater ſpirit, a livelier eye, and a higher brow.

The ſtag in his prime of life, and the roe, are both on the ſcent and liſtening, with every ſign of ſwiftneſs, circumſpection, and peaceful innocence. There is in the corner of their eyes a ſharp point that indicates a quick ſenſe of hearing, and watchful ears.

The wild goat has prodigious ſtrength in his nerves to bear, as he does, an enormous weight of horns. There is, however, a degree of delicacy in the corner of his eyes, conſiſtent with his timid and reſpectable appearance, in compariſon with more ferocious brutes.

For inſtance; is not the wolf eaſily known in his true light, from his formidable teeth, furious, treacherous, ſtaring, and ſanguinary look?

Nor can we be miſtaken in attributing to the fox that low cunning, weakneſs, and rapacity, which his countenance expreſſes.

The weaſel's form indicates his art and agility.

We

We need only view the lynx for a moment, at the crooked line in his muzzle, and the ruffled brows, added to the ſwiftneſs of his motions, in order to be convinced of his cruel deſigns.

The beaver poſſeſſes leſs courage than ingenuity: he is armed with teeth fitter to gnaw than devour.

The powerful elephant is of an overbearing character, ſuch as agrees with his gigantic figure.—Well-turned and hollow bones mark his ſagacity. His *embonpoint* is proportioned to that luxurious ſtyle of living, of which he is ſo fond. The ſupple trunk diſcovers prudence and craftineſs; while the length and compaſs of his brow are ſigns of that retentive memory for which he is diſtinguiſhed.

Were it not for the ſtriking ſituation of his forehead, with reſpect to his eyes and mouth, we might diſcover a greater reſemblance of a human being than is viſible in any other creature. But it is a man's brow alone that always forms a right angle, more or leſs regular, with the axis of the eye, and line of the mouth. In ſhort, every glance of an elephant's eye proclaims his ſuperior abilities.

The bat expreſſes in all his diminutive body a vile and violent paſſion, that he dares not indulge in the face of day; nor are his hidden eyes adapted to light. His form indicates agility; while the tail, adjoining to his wings, is the type of his miſchievous diſpoſition.

ESSAY XIX.

On Birds.

NATURE has likewiſe drawn on birds a true picture of their different characters, according to their ſpecies and place in the ſcale of beings.

Were we only to conſider their tender conſtitutution, delicate form, and ſuperior faculties, confined within a narrow compaſs, in a comparative view with other living creatures, it might be juſtly ſaid, that, next to man, the feathered race is beſt entitled to our admiration.

Their little bodies contain more ſtrength than has fallen to the lot of the moſt formidable four-footed animals, with a greater degree of nimbleneſs, by means of wings, which are marks of their independence. Thus, having the power to viſit all parts of the world, they fly from one climate to another, according to thoſe changes which inſtinct teaches them to foreſee; ſo that the whole univerſe is their country, or wherever they can ſoar under the great canopy of Heaven.

They are of a lighter form than quadrupeds, having a more pliant neck, and a ſmaller head, with a pointed beak, inſtead of a mouth. To them be-

longs an almoſt deſpotic power over the inhabitants of three elements,—the air, earth, and water; together with an excluſive right to rule over the whole tribe of inſects, who ſeem to have been created for no other purpoſe than to nouriſh their voracious maſters.

Nor do they fear the poiſon of reptiles; while fiſh at ſea, and four-footed beaſts on land, become alternately the devoted prey for fowls of the air.

A hawk attacks the fox; the falcon ſeizes the antelope; the griffin devours a wild goat.

Superior to them all, the imperial eagle takes a bolder flight, defying the rays of the ſun, looking with his piercing eyes over extenſive dominions, and diſcovering at a diſtance in a retired ſpot, on the wing, or perched upon a tree, the feeble animal that is doomed to ſatisfy his craving appetite.

Suddenly the proud tyrant pounces on his prey, graſps it in his claws, and carries it in triumph either to a ſolitary rock or a deſerted village, where he ſoon enjoys a delicious repaſt.

Is it, then, poſſible for us to conſider that king of birds, without feeling how much his form and features correſpond with his majeſtic authority? Is not his ſparkling eye like lightning? Who elſe but he dares ſoar ſo high to view the brilliant ſtar of day?

What other ſight, like his, from the mole upwards, is formed to ſurvey at once the firmament,

and the whole range of creation? Indeed, not only that commanding feature, but every other, announces his power to dart the wrath of Heaven on every creature that falls within his arbitrary gripe.

Inferior to him, the vulture may boaſt of a more ſupple neck and bill, with a graceful mien.

The owl is likewiſe a voracious bird of the loweſt claſs, equally weak and timorous.

The Engliſh fighting cock has a beak proportioned to his weakneſs; but, notwithſtanding his pride, preſumption, and jealouſy, he is inferior to birds of his ſize, and probably more amorous.

The parrot prates and aſſumes conſequence with no better pretenſions than his ſpeech and feathers.

But the pigeon is a juſt emblem of peace, modeſty, and timidity.

Neither the dove's good-nature, nor the wild duck's revengeful look, is viſible in the pelican's ſmall head, and long bill, by which he is, in ſome meaſure, deformed, or, at leaſt, has an unmeaning appearance.

The ſwan looks nobler than a gooſe, is weaker than the eagle, leſs tender-hearted than the dove, and more graceful than the oſtrich.

The wild duck has a fiercer air than the ſwan; but however big he may be, compared to an eagle, his ſtrength is not in proportion to his ſize.

As

As the oſtrich is ſaid to grind glaſs, and digeſt iron, he was not formed to feel compaſſion; yet the croſs lines in his face expreſs more tenderneſs than the ſtraight and pointed *traits*. For the ſame reaſon, the long line, that divides the cloſe beak of this bird, indicates clearly the hardneſs of his heart, in ſuch a manner as forms a contraſt between him and a man in that particular feature.

But, upon the whole, and generally ſpeaking, if we conſider all the advantages that birds enjoy over every ſpecies of animals on earth, they will be found entitled to the next place, for pre-eminence, after mankind; particularly from their undiſputed perfections,—ſuch as a ſtately gait, upright walk on two feet, imitation of muſical ſounds, wedded love, motherly affection, and ſocial virtues, added to the invaluable gift of flying to an immenſe diſtance, much ſooner than the ſwifteſt four-footed animal could perform a ſhorter race on his more ſolid element.

Nor has Art been able to copy, much leſs excel, Nature's choiceſt colours laviſhed with profuſion upon the plumages of thoſe little amiable creatures, who daily diſplay ſuch a ſplendid ſhow as ſurpaſſes the pomp of dreſs at court, or a coronation, and in a ſtyle that beggars all deſcription; nay, were their lives to be traced from the neſt up to the ſummit of domeſtic happineſs, there would be a wide field open for inſtructive contemplation, with a pleaſant

ſubject for a moſt intereſting hiſtory. But we muſt wave it, with ſo much the leſs regret, as ſtudents will find that this matter alone has already employed the pens of eminent writers in all ages and countries.

ESSAY

ESSAY XX.

On Fiſhes.

IT is evident, that every Phyſiognomy bears a ſignificant mark, expreſſing the degree of faculties aſſigned to each animal on the ſcale of creation.

For inſtance; how widely different is a fiſh compared with man, the lion, and other creatures, particularly in profile, or his ſide-face! His capacity is at the ſame proportionable diſtance from ſuperior underſtanding; for he has not ſufficient ſenſe to think, reflect, act, and contrive a way to eſcape from the net: he can neither ſhut nor cover thoſe dull and globular eyes, which differ much from the ſame organ of ſight in the fox and elephant,—two beaſts remarkable for cunning, proportioned to their features.

Many fiſhes ſeem deſtitute of every quality neceſſary for living either in ſociety or with any kind of communication with each other; ſince, like tyrants, the great ones deſtroy the lower claſs for food, with a total indifference about the manner of devouring them, rather than indulging the taſte while they ſatisfy their ravenous appetites: yet finny tribes of this deſcription poſſeſs more than half

half the globe in brooks, rivers, lakes, and ſeas, in an incalculable number, and with an infinite variety of forms, powers, habits, and complexion.

But, much as this matter exceeds the comprehenſion of vulgar minds, it is ſtill big with diſcoveries, expected from the united labours of enterpriſing men. In the mean time, it is ſufficient to add, that every library contains valuable treatiſes on the numerous inhabitants of the ocean, and others who live at home for our ſupport and pleaſure.

ESSAY

ESSAY XXI.

On Amphibious Animals.

THIS claſs of animals, partaking of two natures, is leſs numerous than the laſt; but, ſince they are not ſo well known, it is our duty to mention ſome particulars reſpecting their exiſtence. They are either naked, or covered with ſcales; being called amphibious, not becauſe they live alike on land or in water, but from the circumſtance of their breathing at unequal intervals, and not regularly, as other creatures do. It is true, that they can exiſt for ſome time in the air, but not under water ſo long, without periſhing. Their blood is not warmer than that intermediate ſpace which they fill. Thus a touch of their cold bodies makes an unpleaſant impreſſion, added to the horror that they inſpire by their offenſive ſmell, ſuppoſed poiſon, and ghaſtly figures.

Some of them are four-footed,—ſuch as the tortoiſe, the toad, the frog, the cameleon, the ſalamander, the lizard, &c.

Others have no feet,—ſuch are vipers, ſerpents, adders, &c. Tortoiſes are quiet, mild, and cool, being ſeemingly affected by no ſtrong paſſions.

Spallanzani

Spallanzani having had the cruelty to behead the male while he was careſſing his love, he continued, for ſome time, to hatch her eggs, and lived four-and-twenty hours after having ſuffered that fatal operation. Another of the ſame ſpecies, being deprived of his brains, has been known to retain all the ſigns of life for ſix months. After being ſeparated from the body, his head undergoes no ſtriking change for ſome hours, and his blood continues to circulate during twelve days, or longer. A frog's heart has been ſeen to pant a fortnight after the loſs of his bowels. Free tortoiſes live upwards of a century, and twenty years before they come to their full growth.

The toad's body is greeniſh, and ill-ſhaped, with ſmall puſtules or ſwellings like biles, moiſtened with a kind of glue. This animal lives in the moſt unwholeſome ſpots, taking delight to diminiſh the cauſes of infection. He ſtares at a man, and ſhoots on him his ſlimy venom, which, however, is not dangerous.

The frog is oblong, ſmooth, and hump-backed. His hoarſe croak proceeds from bladders, fixed near his wind-pipe, which he fills and empties continually.

The crocodile is of a longiſh form, covered with ſcales, and adorned with a tail, being armed with a ſaw on his back, beſides terrible teeth ſuited to his voracity. He cannot be attacked without riſque; but,

but, luckily, ſome other creatures, by deſtroying his eggs, diminiſh the breed.

The cameleon is a ſingular creature, whoſe body is compact, and partly compoſed of ſhagreen, with large and ſparkling eyes. He changes colour from ſickneſs and vexation; but it is not true that he takes the complexion of ſurrounding objects, according to that vulgar opinion which has rendered him the emblem of flattery. He is found in Aſia and Africa.

The lizard is a ſmall, pretty, and amphibious animal, with a long and pointed tail, full of little ſcales; with a long body, like a cylinder, fixed to his head; and without a member fit for motion.

The ſerpent ſlides along the ground with ſuch velocity as renders him almoſt inviſible, till he has climbed on a tree, or leaped over a precipice, with equal rapidity. Inſtead of ſupporters on the lower part of their bodies, ſerpents have large moving blades, riſing and falling by means of a particular muſcle. Beſides this lever, they have the power of bending the middle of their trunk into a bow, from which they ſhoot themſelves out like an arrow, after having uſed their two waving ſides as elaſtic ſprings, which ſpend their force in puſhing them forward to an incredible diſtance.*

Serpents

* What a leſſon is here for the ſtudy and application of mechanic powers! Nature furniſhes ſuch a model as has not been excelled in the

Serpents have a very ſmall, but moſt expreſſive face, ſtamped with all the traits of malice and impoſture. Their wiles are beyond conception, notwithſtanding their evident want of judgment, reflection, and memory.

Their variegated ſpots and colours impreſs us with a ſufficient idea of deceit to put every man on his guard; and were we to rove through all the wilds of America, not one ſerpent would be found capable of inſpiring with his looks either affection or confidence. Let us ſuppoſe ſuch features as his in a human countenance;—we ſhould turn from it with horror.

Sly people, indeed, have their eyes ſunk deep in the ſockets; but the ſerpent has his ſight on a level with the head, as a mark of malicious deſigns: he reſembles only that deſpicable deſcription of men whoſe low cunning is a ſubſtitute for wiſdom. Without any of that ſprightlineſs which diſtinguiſhes other brutes in their enjoyments, ſerpents diſcover no marks of love and harmony, nor any turn for innocent recreation among themſelves; but,

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the machine at Marly, for conveying the water of the Seine acroſs a hilly ground to Verſailles. Although that was once the wonder of a ſplendid age, yet ſo great are the improvements ſince made in this art, particularly in England, that were the iron-work in it delivered to Bolton and Watt, of Soho, they would probably undertake to make a better mill for the ſame purpoſe, without requiring any other compenſation for their trouble.

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in melancholy mood, they lie down on the brink of a pool, in hollow rocks, or under barren buſhes. However, as every link in the chain of creation deſerves notice, ſo, with all their imperfections, theſe animals excite a degree of intereſt in the mind of a naturaliſt, who ſees with pleaſure their admirable ſtructure rendered uſeful to them upon the principles of mechaniſm.

ESSAY

ESSAY XXII.

On Insects.

INSECTS form a world ſeparate from other beings; and, far as they are removed from the human ſpecies, the Phyſiognomiſt will find them fit objects of meditation. This truth muſt inſtantly ſtrike him —that the figure of every creature indicates its active and paſſive power, or in what degree it can enjoy or deſtroy, ſuffer or reſiſt.

For inſtance; is it not clear, that an inſect with hard and cloſe wings appears much ſuperior to the puny butterfly, who has not the ſame advantage? At the ſame time, does it not ſtrike a ſuperficial obſerver, that the ſofteſt ſubſtance muſt be the weakeſt, and, conſequently, moſt liable to be deſtroyed?

Another remark will be made,—that the total want of brains renders theſe creeping creatures a direct contraſt to man, who is ſo abundantly ſupplied with that neceſſary article.

Beſide, is there not among their various claſſes a material difference conſiſtent with their character?

The waſp diſcovers more ſpirit than the caterpillar, who crawls as if he had ſcarce a breath of life

life more than that dry branch of a tree which he reſembles.

The butterfly's delight to ſuck at every flower correſponds with his tender frame, formed to enjoy the ſweets of the garden, and periſh with a blight like the roſe. His pliant trunk marks his harmleſs weakneſs.

The bee revels in luxury, with a fixed plan of living, above the fly, who is free and eaſy, but without any fixed object of his deſires.*

Compared with butterflies, ſpiders are ſwifter, more alert in ſeizing, and more voracious in devouring the ſmaller brood.

But, above them all, the ant ſets an example of foreſight, courage, and perſeverance, beyond any idea that we could conceive of this poor piſmire from her weak appearance.

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* F. Hubert has lately publiſhed at Geneva ſome new and curious Obſervations on Bees.

This author, being born blind, but with a ſtrong paſſion for ſcience, ſucceeded in making improvements of hives, and ſuch diſcoveries as had eſcaped the penetrating eyes of Reaumur, Bonnet, and Swammerdam; particularly concerning the queen's propagation; miſcarriage of drones; the change of government during her majeſty's retirement; the manner in which their worms ſpin ſilk from the cods; and other experiments, made by him in the courſe of his ſtudies, aſſiſted by a faithful ſervant, to whom he communicated the ſame turn of mind. —What a pity it is that ſo few men are diſpoſed, or qualified, to follow theſe uſeful and laudable purſuits!

Covered with a coat of mail, and dreſſed in a ſtrong ſuit of armour, the may-bug takes pride in diſplaying his power to do miſchief and defend himſelf.

The gnat's grinders are adapted to his character for gnawing, and eating greedily, whatever comes in his way.

The graſshopper diſcovers the ſame ravenous appetite, by his open and menacing mouth.

The horn-beetle, or bull-fly, appears cruel and ferocious. Like him, there is a ſwarm of reptiles whoſe united features might ſerve to furniſh a picture of the greateſt wickedneſs, were it not unfortunately found in the faces of nobler creatures. True it is, however, that much as they vary in ſhape, colour, and inclinations, we find them all wiſely formed by the Creative hand to anſwer the ſecret views of Providence.

ESSAY XXIII.

On Worms.

AMONG all living creatures, worms are thoſe whoſe deſcription forms the moſt difficult taſk, on account of their incalculable number and infinite varieties, abounding in all parts of the univerſe, in every element, as well as in animals and vegetables, for the wiſeſt purpoſe;—as if they were the principal agents employed by Nature to deſtroy, corrupt, or purify her glorious works.

They are generally divided into ſix claſſes, deſcribed according to their reſpective forms and qualities, viz.—

1ſt. Microſcopic worms, reſembling vegetables, —ſuch as the polypus, the proteus, and others which are not familiarly known to us, on account of the changes that they undergo; but they are all equally diſtinguiſhed by one common trait,—their voracity in deſtroying whatever ſolid body comes within their reach, except their own ſpecies;—as if they had no other faculty than to digeſt, as they do, in their imperfect ſtate of exiſtence.

They poſſeſs the ſurpriſing power to reproduce themſelves, not only from their eggs, but likewiſe

out of the divided parts of their bodies, whatever way the ſeparation be made, lengthwiſe or croſſwiſe, in a ſingle or double diviſion.

2dly. Inteſtine worms are eaſier to be diſtinguiſhed, as their bodies are harder, longer, and more regular. They live in the bowels of animals, by ſea and land. Being produced by eggs, they have alſo the ſame regenerating faculty as others for reviving out of their mutilated parts. Their Phyſiognomy inſpires fear and melancholy; nay, the very thought of ſome grubs, like theſe, ſuffices to make unpleaſant impreſſions. We ſhall not, therefore, extend this deſcription at the riſque of giving pain to delicate minds.

3dly. Glow-worms are hitherto very little known, except from the quality peculiar to them of favouring the benighted traveller with their dazzling light, particularly on the ſea-ſhore, in different parts of the globe. We can only add, that theſe ſhining worms are of various kinds, differing much in their form and qualities.

4thly. This fourth claſs, called by the French *echinodernes*, is equally beyond human comprehenſion for deſcribing it properly, ſo far as to form a right judgment of all its *traits*. We know that, like others, they reproduce themſelves out of their ſeparated members.

5thly. Teſtaceous worms are covered with ſhells, like the ſnail. They open a larger field for obſervation,

vation, as not only their heads, but other parts, are viſible to the naked eye; even growing muſcles are to be ſeen in ſome of them, with a full growth of ſhells in ſpires, by which the grub's age may be aſcertained: but men have generally admired more this worm's cabin than himſelf, on account of its gaudy colours, and beautiful ſtructure. The admirers of Nature, after having done juſtice to his taſte and ingenuity, will, however, indulge a train of thoughts about the method uſed by ſuch a puny creature, to execute that maſter-piece of architecture in a ſtyle of elegance and inimitable perfection.

6thly. The zoophytes, or ſea-polypuſes, have been conſidered as vegetables for many ages; but ſome naturaliſts now pronounce them to be the intermediate link in Nature's chain between the animal and vegetable worlds. Be that as it may, we lament that this branch of natural hiſtory has not been cultivated with ſuch ſucceſs, as to excite a ſtronger intereſt, that might tend equally to gratify curioſity, and produce uſeful diſcoveries.

ESSAY XXIV.

On Vegetables.

A THINKING man cannot look about him without feeling curious to know the faces of all living creatures, particularly thoſe who contribute moſt to his comfort and entertainment. Hence ariſes an anxious concern to penetrate the ſecrets of Nature upon an extenſive ſcale; but let not ſelf-love miſlead us to conceive too high an opinion of ourſelves, when we conſider the various ſurrounding objects which attract our attention, and deſerve admiration.

Thus, if plants do not poſſeſs all the moving ſigns or geſtures peculiar to animals, they ſpeak an eloquent language at every period when they renew their exiſtence, and diſplay freſh beauties in tender branches, leaves, or bloſſoms, proclaiming their reſpective parents. We need not dwell on the many changes that they undergo. Let it ſuffice for us to retrace ſome of the ſenſations raiſed by this lovely part of the creation, already divided into thirty thouſand claſſes, and diſtinguiſhed by the different impreſſions which they make on our minds.

Do

Do not our wearied eyes find gentle repoſe, and our troubled hearts derive freſh ſpirits, from the ſight of a ſoft verdure?

Are we not ſtruck with noble and awful ſentiments on treading the footſteps of our forefathers, at an early hour, in that ſacred grove whoſe lofty branches waft a gentle zephyr, while the hollow trunk betrays the marks of ages paſt; or the more pleaſing effuſions of a tender heart, in a few poetic lines, carved on the rind by a conſtant lover, who is now no more?

How pleaſant is a botanic garden, where tranſplanted ſhrubs of every growth, country, and climate, meet in cloſe ranks, ready to ſerve us in a thouſand ways!

The roſe is like a beautiful coquette, who diſplays her charms to all the world; but the tuberoſe appears more coy. The violet and panſy exhibit equally their modeſty; the flower-de-luce diſcovers majeſty, while ſweetneſs breathes in the jonquille and jaſmine; the pink, tulip, and others, join their fragrant ſmells to ſuch allurements as tempt us to enjoy the pleaſures of a parterre glittering with full-blooming flowers.

What expreſſions of good-will towards mankind do we not ſee or conceive in thoſe precious trees, which, waving with the leaſt breath of air, drop or offer us their ſavoury fruits!

Some vegetables will weather the ſtorm, without falling, till they are ripe, and fit to be gathered for our refreſhment; while many a wholeſome plant is doomed to grow unſeen, and waſte its goodneſs on the craggy cliff; nay, there is an infinity of others, poſſeſſing the moſt healing qualities, or formed to lull our ſouls to reſt, which are productions either of the higheſt mountains, or of the deep ocean, deſerted vales, lakes, rivers, and mineral ſprings.

If we reflect, for an inſtant, on their tender frames, compared with the ſolid conſtitutions of living creatures, a ſtriking difference between ſome of them will be diſcovered, in a deviation from the general order of Nature; becauſe the ſtalks or branches of a plant may be ſeparated, without deſtroying its whole exiſtence; while the ſtream of life has not one common centre, but animates alike every part of the vegetative ſyſtem.

Vegetables puſh their growth by three principal ways,—abſorption or ſucking up, circulation or motion of the fluid, and nouriſhment; and by the ſecondary operations of generation and ſecretion; for the acts of budding, grafting, tranſpiring, &c. may be called mere modes of accompliſhing the ſame purpoſe of vegetating.

Their outward parts exhibit only a fuller diſplay of that interior ſubſtance and compoſition, in which they would probably be found to differ materially from

from each other, were ſuch able naturaliſts as Desfontaines to continue reſearches after the diſtinction of ſexes, families, and colonies, in the vegetable world. In the mean time, thoſe plants which live more than one year anſwer the two following deſcriptions, viz.—

1ſt. *Monocotyledones* have no diſtinct concentric ſprigs or layers pointed towards the middle: their juice runs through the fibres or filaments, without any ramifications tending to, or from, one point.

2dly. The *Dicotyledones* are of a deſcription oppoſite to the laſt, agreeable to the circulating ſyſtem of the blood and fluids in other animals.

In the firſt claſs we reckon the palm, cow-graſs, aſparagus, fern, the daffodil, moſs, &c. &c.

On the other hand, hart-wort, houſe-leek, Indian fig, and others, with two ſeminal leaves, are of the ſecond order already deſcribed.

Theſe two claſſes are invariable, and inſeparable from every partial variation diſcovered in the univerſal ſyſtem: the firſt is pliant or tender, and the ſecond of a harder or more durable kind. Thus, at firſt ſight, we diſtinguiſh the ſlender palm-tree from the beech, the fir, the elm, or other trees diſtinguiſhed by a double ſeminal leaf. Indeed, ſo nicely do we find their kindred marked by ſuch Phyſiognomical ſigns, that, after a ſeries of years, when only the remains of a trunk are brought to light,

light, there is no doubt or difficulty in aſcertaining to which family it belongs.

In obſerving the palm, we can eaſily make the additional diſcovery of its age, from the circular lines with which the ſurface of the ſtock is furrowed over, even ſo far as to affect the whole outward compaſs.

Beſides theſe natural diſtinctions, there are accidental differences or diſformities to which a plantation is ſubject from an interruption of growth, ſuch as has fallen within the limits of every man's obſervations at Paris, as we ſhall prove by the following caſe in point:——We may ſee there, in the King's, or National Garden, a palm conſiderably ſhrunk in the middle, from a cauſe well known, and hereafter explained.

This plant was carried to the Iſle of France in a ſmall cheſt, and ſhipped off for Europe in the year 1789; but, notwithſtanding the care taken of it upon the paſſage, and afterwards, it continued long in a languiſhing condition. At laſt, as the vegetation had been entirely ſtopped, the ſtalk grew up ſome inches, with this difference,—that the ſecond growth was much ſmaller than the former; and, although theſe freſh ſhoots have gradually riſen conſiderably, there ſtill are, and ever will be, viſible ſigns of that contraction; for where this defect appears, the circumference is thirteen inches, twenty-one lower, and eighteen above. This tree grew about

about a foot in eight years. The additional height is a regular cylinder, and not ſo thick as from the contracted part down to the root, becauſe its vegetation was not ſo much forced in a temperate climate as in the native ſoil where it firſt grew, under the torrid zone.

But ſimilar effects cannot poſſibly proceed from the ſame cauſes in trees differently deſcribed, which grow up with uniform ſtalks directed to one central point; ſo that, however they may vegetate in different countries, the trunk will preſerve its primitive form: yet, notwithſtanding this affinity between them all, in ſome reſpects, if we conſider attentively the ſcattered colonies tranſplanted all over the globe, the reſult of our reflections will be a conviction,—that theſe living creatures (plants) have, like others, an original race, from which they are deſcended, and a mother-country, beſt ſuited to their reſpective conſtitutions.

This truth muſt appear in a ſtronger light, from a comparative review of ſuch as are called branches of the *natural families of plants*.

Muſhrooms, and their relatives, grow regularly upon one ſcallion, with a ſtalk terminating in a chapiter, or like the top of a pillar. They are all of a ſpungy ſubſtance, porous, cracked, and in pointed blades, growing on putrified wood.

Moſs conſiſts of ſeveral ſmall leaves, growing ſeparately upon one ſtem, and blooming in winter.

Inſtead of piſtils, and a ſtamina of flowers, the male kind of this herb produces nothing but duſt. A naturaliſt has, however, diſcovered the female with ſeeds in ſhells properly preſerved.

Fern has generally long leaves, like a plume of feathers, rolled up in a ſpiral form till they ſhoot out, being covered with ſhells or pods, and producing grain on the back part of each leaf, as in the *polypode*, or on particular blades, as in the *oſmonde*.

Corn, ſuch as wheat and barley, grows on hollow ſtalks, each knotted, and bearing a ſhell for grain, found at the bottom of a covered chalice. They have generally three ſtamina.

The palm is of a cylindrical form, terminating at top in a tuft of lively-coloured leaves, parting from the centre, and never dropping till others have grown in their place. The plants of this family are *dioiques*, or *monoiques*.

The flower-de-luce has a coloured chalice, or cup, with ſix rows, and ſtamina; a pod in three diviſions, with alternate leaves on the ſtalk, forming a ſheath at bottom, with ſhells for the ſeed opening above.

The daffodil has ſix ſtamina, like the lily, but differs from that ſpecies, in having the *ovarium* for ſeed below.

The iris has only three ſtamina, and is like the daffodil in other eſſential parts.

Sage

Sage and nettles have ſquare blades; oppoſite leaves, with flowers in ringlets; a cup, or chalice, riſing like a ſaw, with five edges; four ſtamina, but only two in a perfect ſtate. Their ſtyle reſembles a fork with two prongs, and their ripe fruit is without a huſk.

Calf's-muzzle, flax, &c. differ from the laſt-mentioned ſpecies, in having the grain in a ſhell, called the pericardium.

Turnſol, borage, &c. bear alternate leaves, checquered with glands, or rough hair; ſtiff chalice, with five deep rows; a regular chaplet *monopetal*, or formed of one petal; but in the viperina, or viper's herb, it is irregular, like a wheel, or a funnel. This kind of plant has five ſtamina, or threads.

The apocina and periwinkle have a five-edged cup, from which a double follicle, or veſſel for the ſeed, ſhoots out; with a ſingle wreath of five rows, five ſtamina, and grain with or without an aigrette, like a heron's cap.

Some of this kind are poiſonous, or, at leaſt, unwholeſome; and even the laurel-roſe is dangerous.

The three following kinds are of the *compoſite* order, having ſeveral diſtinct flowers united in a common chalice; ſingle-leaved garlands fixed upon one ovarium, or veſſel, for the ſeed; bare grain; five threads, or ſtamina, united on the ſides with alternate leaves, in general; and other ſlight ſhades

of

of difference, too well known to require a fuller explanation, namely:—

1ſt. The *ſemi-floſcular*, ſuch as the lettuce and piſſabed, which conſiſt of flat flowers in long blades, like demi-flower-work.

2dly. The floſcular kind has a perfect flower-work, as we ſee in the artichoke, heart's-eaſe, or the trinity.

3dly. Radiant herbs have a complete flower-work in the centre, and demi-fleurons, or blades, like tongues, in the circumference,—juſt as we find the virga aurea, or the golden rod, and the doronica.

The ſcabious herb differs only in not having the ſides united.

Madder, and the milk-curdler, have ſtiff blades, with ſtraight or croſs leaves; intermediate bars between the buds or untimely ſhoots; a ſingle-leaved chaplet; four or five ſtamina; bare fruit, covered with a huſk, or buried in the berry.

Parſley, carrots, and others, called *ombelliſer*, bear flowers ſhooting out from their centre like an umbrella; having a five-leaved garland, or chaplet; five ſtamina, which fall early; two ſtiles or rows of grain, which has a ſmall thread in the middle, and ſeparates itſelf in an upward direction when it has been preſſed.

The cabbage is cruciform, with a four-leaved cup, or chalice, decaying; four petals like a croſs;

ſix

... ...amina, of which two are ſhort; one ſtile, and one ſhell for the ſeed.

Mallows are diſtinguiſhed by alternate leaves; two petals, with knots or bars at the bottom; ſingle or double chalice, complete; a five-leaved chaplet fixed on the baſe of a pillar formed by the union of the different threads which compoſe the ſtamina; together with one or more ſtiles, and either ſeveral veſſels placed in a circular row, each containing one grain, or a ſingle ſhell holding ſeveral grains of ſeed in ſeparate folds.

Theſe plants are ſlimy, and their bark is ſufficiently hard to ſerve for making ropes or paper.

The geranium differs from mallows principally in having a hollow tube like a crane's back, opening from the bottom upwards.

Five branches of this ſpecies ſhoot out and form a ſmall ſtar. The cup, or chalice, is plain, with deep rows, five petals, and compact or cloſe threads, or ſtamina.

The pink has oppoſite rows of leaves; a ſolid, longiſh, and ſingle-leaved chalice; five petals, terminating in a point like a graver, fixed under the piſtil; with ten ſtamina, or branches; ſeldom four, two, or five ſtiles; and fruit that becomes a huſk opening above. The grain ſticks on a pyramid in the middle of the ſhell.

Apples

Apples and pears are of that numerous claſs which produces the moſt pleaſant fruit, partly diſtinguiſhed by kernels.

They have alternate leaves, with a ſingle tuft divided into ſeveral parts; having five petals of flowers, with from twenty to a hundred branches; and ſeveral ſmall twigs, all concentrating to give theſe trees a moſt ſhowy appearance in full bloom.

They produce nothing but ſuch ſalutary food as a child may ſafely eat, and ſoon know from any other, by looking at the trees thus deſcribed.

Pulſe, peas, and beans, bear alternate leaves, with a cup of one piece, and an irregular crown of various flowers, reſembling a butterfly.

It is on account of ſuch a likeneſs, that gardeners call the upper petal, the ſtandard; thoſe on the ſides, wings; and the lower ones, flankers. The latter is ſometimes but a ſingle leaf, and often found to be formed by two united petals.

The ſhells frequently grow together, ſo as to be only ſeparated with difficulty.

The willow, filbert, &c. conſiſt of trees or ſhrubs, which produce alternate leaves ſhooting out, or concealed in pods; with male flowers like the collet of a ring; and female ones, ſeparate by themſelves, or united in circles about the ſame ſtalk that generally produces both ſexes.

We have already had occaſion to mention that claſs of plants which yield fruit like a cone, or a ſugar-

ſugar-loaf;—ſuch as the pine and the fir, whoſe apples are familiar to every body.

Their leaves are alternate, ſhooting out at once, or penetrating through a pod, and yielding flowers, of which each ſex, by turns, embelliſhes the different twigs from one ſeaſon to another, in continual cluſters, and never-ceaſing ſucceſſion.

Thus have we reviewed many glorious works, without wiſhing to treſpaſs on any reader's patience.

But, however conciſe or imperfect theſe ſketches may be, let us hope that they will enable a young ſtudent to form a juſt idea of all animals, by examining their faces, manners, complexion, and diſpoſition, while, with reverence, he conſiders thoſe wiſe views of Providence for which they were deſigned.

With theſe impreſſions, aſpiring to know more, the liberal-minded ſcholar will then conclude by ſaying——Such is the boaſted privilege of man; the creature endowed with the greateſt gifts of Heaven, reaſon, ſpeech, and ſuch ſuperior intellects as render him the ſovereign lord on earth!

FINIS.

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